A motivational perspective on the user acceptance of social media

by

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DECLARATION

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A.H. Nelmapius

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ABSTRACT

The use of social media as a unique marketing communication tool to engage with a new age of consumers has become an essential element of any organisation's strategic planning. On social media sites, consumers are engaging with and producing information, as opposed to traditional media where the marketer is in control of the media message content and information dissemination.

The challenge for marketers in this new market communication context is to create a venue for conversation with the customer without appearing to control the conversation. In order for the marketer to be this invisible influencer, marketers need to understand the dynamic perceptions, motivations and uses of social network sites. User acceptance theories can be a valuable framework for exploring human behaviour in this computer-mediated environment.

The primary objective of this study was to investigate the intentions of users and non-users of social network sites to either continue using social network sites or to use social network sites in the future, by using a comprehensive, decomposed Theory of Planned Behaviour. Due to the size and complexity of the decomposed Theory of Planned Behaviour, the antecedents to the *Intention to use* social network sites were divided into two sub-models, namely motivators and barriers to social network sites usage. In addition to the antecedent motivators and barriers, the gratifications sought from social network usage were also explored, to identify the reasons for continued social network sites usage or non-usage. This choice of continued usage of or non-usage of social network sites by both user and non-user groups, was further investigated, using a logistical regression analysis, to quantify the probability of group. The demographical attributes of the users of social network sites with regard to certain specific social network site use, were also investigated.

The study utilised a questionnaire with closed-ended questions to collect demographical information of the respondents. A seven-point Likert scale was selected as the appropriate measurement scale, taking into consideration that the variables under investigation were latent and, therefore, not directly observable. The Likert scaled questionnaire was used to draw a quota sample of 307 users of Facebook and 337 non-users of Facebook. The data was analysed using the statistical computer programmes LISREL 8.80, AMOS 18 and SPSS 21.

The results indicated that there was no statistically significant difference between the genders with regard to the reported number of years' membership of Facebook, number of hours spent on Facebook per week, the number of Facebook visits per week and the number of Facebook friends. A statistically significant difference did exist, however, between males and females, with regard to the number of hours spent on Facebook per week.

The differences among the age categories showed a statistically significant difference only in relation to the number of the Facebook friends' dimension, with the age group 15-25 having statistically significantly more friends than the older age categories.

The results denoted that three of the potential barriers of Facebook usage, namely *Dispositional trust*, *Internet self-efficacy* and *Psychological risk,* had the same influence on the intention of individuals to use Facebook among both users and non-users of Facebook. These constructs are an intrinsic, dispositional part of the character and abilities of an individual and suggest that the reason for the lack of use by non-users of Facebook is not due to systematic differences, in the characteristics between the users and non-users of Facebook. The one exception is *Privacy risk*, which was found to be a statistically significant barrier to Facebook usage by Facebook non-users only and represents an important finding for social media marketers, as it serves as evidence that privacy concerns do influence users, to such an extent that they will choose not to use technology as a result of these concerns.

In a similar manner to the barriers to Facebook use, the results indicated that the motivators of Facebook usage (*Perceived enjoyment*, *Perceived usefulness*, *Perceived ease of use*, *Need for cognition* and *Susceptibility to norm influence)* had the exact same influence on the *Intention to use* Facebook for both users and non-users of Facebook. The motivators of Facebook were all external influences, except for the *Need to belong* (intrinsic), which was found to be an insignificant predictor of Facebook usage. This finding implies that there is no difference in the external influences exerted on both users and non-users of social network sites and, therefore, external influences are not the cause of the lack of use of social network sites by non-users.

The results showed significant statistical differences between the gratifications sought by Facebook usage between the users and non-users of Facebook. The results further indicated a greater *Continued intention to use* Facebook by the users of Facebook compared to non-users in terms of gratifications sought. Based on these findings and the results of the motivators and barriers of Facebook usage, it is concluded that non-users' lack of social network site usage is not as a result of systematic dispositional difference with users or because of differing external influences, but rather due to the fact that non-users of social network sites are not motivated sufficiently by specific gratifications created by social network site usage.

The results for specific gratifications, rather than dispositional characteristics or external influences, thus, has a greater influence on non-users' lack of participation in social network sites. This could suggest that specific gratifications are the reason for the usage of social network site by users of these sites. Marketers, therefore, need to ensure that any marketing offerings should address the specific gratifications needs of their target market, in order to attract more traffic to their social network sites.

An important objective of this study was to compare users of Facebook with the non-users, to establish whether specific dispositional, situational or outcome variables were significant in influencing group membership. A logistic regression analysis was used to assess which variables had the biggest influence on group membership.

The results showed that the variables: specific Age categories, Perceived ease of use, Perceived usefulness, Psychological risk, Perceived enjoyment and Susceptibility to norm influence were all significant predictors of Facebook usage. However, the variables gender, the age categories 26-35 years and 36-45 years, Dispositional trust, Internet self-efficacy, Need for cognition and Privacy risk were not statistically significant predictors of group membership.

This research provides marketers with a full range of social network site perceptions to consider, so they can devise customised, multi-layered marketing offerings to encourage the use of social network sites for e-Commerce

ABSTRAK

Die gebruik van sosiale media as 'n unieke bemarkingskommunikasie-instrument om ‘n nuwe generasie verbruikers te benader het 'n noodsaaklike element van strategiese beplanning vir alle organisasies geword. Die verbruikers op sosiale media webwerwe, is verantwoordelik vir die vervaardiging en gebruik van inligting, wat fundamenteel verskil van die tradisionele media, waar die bemarker in beheer is van die media boodskap inhoud en inligtingverspreiding.

Die uitdaging vir bemarkers in hierdie nuwe bemarkingskommunikasiekonteks is om die geleentheid vir dialoog met die kliënt te skep, sonder om die indruk te skep dat hulle die dialoog probeer beïnvloed. Ten einde vir die bemarker om hierdie onsigbare invloed uit te oefen, moet hulle die dinamiese persepsies, motiverings en gebruike van sosiale netwerk webwerwe verstaan. Gebruikeraanvaardingsteorieë kan 'n waardevolle raamwerk verskaf om menslike gedrag in hierdie rekenaar-bemiddelde omgewing te ondersoek.

Die primêre doel van hierdie studie was om die voornemens van die gebruikers en nie-gebruikers van sosiale netwerke te ondersoek om óf voort te gaan om sosiale netwerke te gebruik of om in die toekoms sosiale netwerke te begin gebruik, deur 'n omvattende gedekonstrueerde Teorie van Beplande Gedrag te gebruik. As gevolg van die grootte en kompleksiteit van die gedekonstrueerde Teorie van Beplande Gedrag, is die voorlopers om die bedoeling om sosiale netwerk gebruik verdeel in twee sub-modelle, naamlik motiveerders en hindernisse tot sosiale netwerkgebruik. Benewens die voorafgaande motiveerders en hindernisse, is die belonings wat spruit uit sosiale netwerkgebruik ook ondersoek, om die redes vir die voortgesette gebruik ,al dan nie, van sosiale netwerke te identifiseer. Hierdie keuse van voortgesette gebruik ,al dan nie, van sosiale netwerke deur beide die gebruiker- en nie-gebruikersgroepe, is verder ondersoek, met behulp van 'n logistieke regressie-analise, om die waarskynlikheid dat nie-gebruikers sal besluit om sosiale netwerke te begin gebruik te kwantifiseer. Die demografiese eienskappe van die gebruikers van die sosiale netwerk webwerwe met betrekking tot sekere spesifieke gebruike van sosiale netwerk webwerwe, is ook ondersoek.

Die studie benut 'n vraelys met geslote-einde vrae om demografiese inligting van die respondente in te samel. 'n Sewe-punt Likertskaal is gekies as die toepaslike meting-skaal, aangesien die veranderlikes wat ondersoek word latent is en dus nie direk waarneembaar is nie. Die Likertskaal vraelys is gebruik om 'n kwota monster van 307 gebruikers van *Facebook* en 337 nie-gebruikers van *Facebook* te trek. Die data is ontleed met behulp van die statistiese rekenaarprogramme LISREL 8,80, AMOS 18 en SPSS 21

Die resultate dui daarop dat daar geen statisties beduidende verskil tussen die geslagte ten opsigte van die aantal jare lidmaatskap van *Facebook*, aantal ure gespandeer op *Facebook* per week, die aantal *Facebook* besoeke per week en die aantal *Facebook* vriende is nie. ‘n Statisties betekenisvolle verskil bestaan wel tussen mans en vrouens met betrekking tot die aantal ure gespandeer op *Facebook* per week.

Die verskille tussen die ouderdomskategorieë het 'n statisties beduidende verskil aangedui slegs in verband met die aantal *Facebook*-vriende dimensie, met die ouderdomsgroep 15-25 wat statisties beduidend meer vriende as die ouer ouderdomsgroepe het.

Die resultate dui aan dat drie van die potensiële struikelblokke van *Facebook* gebruik naamlik *Disposisionele vertroue, Internet selfdoeltreffendheid en Sielkundige risiko* ‘n invloed uitoefen op die bedoeling van beide gebruikers en nie-gebruikers van *Facebook* om *Facebook* te gebruik. Hierdie konstrukte is 'n intrinsieke, disposisionele deel van die karakter en vermoëns van 'n individu en dui daarop dat die rede hoekom nie-gebruikers van *Facebook* nie *Facebook* gebruik nie, is nie as gevolg van sistematiese verskille in die eienskappe tussen die gebruikers en nie-gebruikers van *Facebook* nie. Die enigste uitsondering is *Privaatheidrisiko*, wat bevind is om 'n statisties beduidende struikelblok tot *Facebook* gebruik te wees slegs vir nie-gebruikers van *Facebook*. Hierdie verteenwoordig 'n belangrike bevinding vir sosiale mediabemarkers, want dit dien as 'n bewys dat kommer oor privaatheid gebruikers wel beïnvloed, tot so 'n mate dat hulle sal kies om tegnologie nie te gebruik nie, as 'n gevolg van hierdie bekommernis.

In 'n soortgelyke wyse as die hindernisse van *Facebook*gebruik, het die resultate getoon dat die motiveerders van *Facebook*gebruik (*Waargenome genot Waargenome nut, Waargenome gemak van gebruik, Behoefte aan kognisie en Vatbaarheid vir norminvloed*), presies dieselfde invloed op die voorneme gehad het om *Facebook* te gebruik, vir beide gebruikers en nie-gebruikers van *Facebook*. Die motiveerders van *Facebook* was almal eksterne invloede, behalwe vir die *Behoefte om te behoort* (intrinsiek), wat bevind is om 'n onbeduidende bepaler van *Facebook* gebruik te wees. Hierdie bevinding impliseer dat daar geen verskil in die eksterne invloede is wat uitgeoefen word op beide gebruikers en nie-gebruikers van sosiale netwerke nie; daarom is eksterne invloede nie die oorsaak vir die gebrek aan die gebruik van sosiale netwerke deur nie-gebruikers nie.

Die resultate toon beduidende statistiese verskille tussen die beloningsverlang as gevolg van *Facebook* gebruik tussen die gebruikers en nie-gebruikers van *Facebook*. Die resultate het verder aangedui dat 'n groter *Voortgesette voorneme* om *Facebook* te gebruik deur die gebruikers van *Facebook* bestaan in vergelyking met nie-gebruikers in terme van die belonings deur hulle verlang. Op grond van hierdie bevindinge en die resultate van die motiveerders en hindernisse van *Facebook* gebruik, kan tot die gevolgtrekking gekom word dat 'n gebrek aan sosiale netwerk webwerfgebruik deur nie-gebruikers nie is as gevolg van stelselmatige disposisionele verskille met gebruikers of as gevolg van verskillende eksterne invloede nie, maar eerder as gevolg van die feit dat nie-gebruikers van sosiale netwerke nie voldoende gemotiveer word deur spesifieke belonings geskep deur sosiale netwerkwebwerwe nie.

Die resultate vir die spesifieke belonings, eerder as disposisionele eienskappe of eksterne invloede, het 'n groter invloed op die gebrek aan deelname aan sosiale netwerke vir nie-gebruikers. Dit kan daarop dui dat spesifieke belonings die rede is vir die gebruik van sosiale netwerkwerwe deur gebruikers van hierdie webwerwe. Bemarkers moet daarom verseker dat enige bemarkingsaanbiedinge die spesifieke belonings en behoeftes van hul teikenmark moet aanspreek ten einde meer verkeer te lok na hul sosiale netwerkwebwerwe.

‘n Belangrike doelwit van hierdie studie was om die gebruikers van *Facebook* te vergelyk met die nie-gebruikers, om vas te stel of spesifieke disposisionele-,

situasionele- of uitkomsveranderlikes ‘n beduidende invloed op groeplidmaatskap het. ‘n Logistieke regressie-analise is gebruik om te bepaal watter veranderlikes die grootste invloed op groeplidmaatskap het.

Die resultate het getoon dat die veranderlikes: S*pesifieke ouderdomsgroepe, Waargenome gemak van gebruik, Waargenome nut, Sielkundige risiko, Waargenome genot en Vatbaarheid vir norm invloed* almal beduidende bepalers van *Facebook* gebruik was. Die veranderlikes *geslag, ouderdom kategorieë* 26-35 jaar en 36-45 jaar, *Disposisionele trust, Internet selfdoeltreffendheid*, *Behoefte aan kognisie* en *Privaatheid risiko* nie statisties beduidende voorspellers van groeplidmaatskap was nie.

Hierdie navorsing bied bemarkers 'n volle reeks van sosiale netwerk webwerfpersepsies om te oorweeg, sodat hulle persoonlike, veelvlakkige bemarking aanbiedinge kan saamstel om die gebruik van sosiale network webwerwe vir e-handel aan te moedig

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Chapter 1

INTRODUCTION, PROBLEM STATEMENT AND DEMARCATION OF THE STUDY

1.1 BACKGROUND TO THE STUDY

Hypermedia computer-mediated environments (CMEs) are global distribution networks which, through their hardware and software, provide “interactive access to hypermedia content (i.e. machine interactivity)”, enabling consumers and firms to communicate globally with each other (Hoffman & Novak, 1996: 50).

The search for, locating and accessing of information - the ultimate purpose being communication, doing business and learning from each other - have been strongly affected by the most dominant CME of them all, namely the Internet. The influence of the Internet on society is evident from the fact that 78% of the North-American population and 34% of the global population are Internet users (Internet Usage Statistics for all the Americas, 2012), with global e-commerce sales reaching $1.3 trillion in August 2013 (Leggatt, 2013) and online advertising reaching 19.5% of total global advertising spending at the end of 2012 (Wolfe, 2013).

Because the Internet and the technology that goes with it, grew so quickly and attracted so many users in a short space of time, a whole collection of new technologies developed, including the development of the next generation web called Web 2.0 and the resultant proliferation of social media. Karakas (2009: 23) defines Web 2.0 as “an interactive, hyper-connected, immersive, virtual, digital online ecosystem or mega-platform”. This platform or mega-platform can be used in various ways: for creating and sharing knowledge (e.g. Wikipedia, Delicious); for innovation and collaboration (e.g. InnoCentive); for entertainment purposes (e.g. Zango, Second Life); for interaction, networking or interpersonal connection (e.g. LinkedIn, Facebook, Skype or Twitter); for designing new products and buying and selling merchandise (e.g. Ebay, Craigslist or Amazon); for connecting and communicating globally via mobile devices (e.g. Iphone, Blackberry); for reflecting via blogs (e.g. Blogger); for sharing photos (e.g. Flickr); for podcasting presentations or making

creative films (e.g. YouTube); for developing projects (e.g. wikis or Google docs) and for general expression of personal ideas, to the world.

However, the most popular Web 2.0 application by far, is online social networking. An online website is considered to be a social network site if it offers web-based services that allow users to firstly construct a public or semi-public profile within a bounded system, secondly, to provide a list of other users with whom they share a connection, and thirdly, to view and traverse their list of connections and those made by others within the system (Boyd & Ellison, 2008: 211).

Thus, it can be stated emphatically that social media has enabled the global community to effectively communicate online (McAfee, 2006: 26). This online communication can vary from conversations in real time where discussion, debating and collaboration with one another take place while millions more watch, listen and learn (Huba & McConnell, 2006: 10). Thus, social media empowers users by allowing them to share content, create content, share thoughts, share views, find information, be entertained, learn, trade and to share personal details (Baumann, 2006: 38)

The popularity of social networks is evident from the fact that Facebook, the largest social network, currently has more than 1,3 billion active users (*Facebook Statistics*, 2014). To put this in perspective: Facebook is now used by 1 in every 10 people on earth; 72% of all US Internet users are registered on Facebook; 70% of the entire user base is located outside of the US; and 57% of people talk to more people online than they do in real life ((*Facebook Statistics, Stats & Facts For*, 2011). All of these user statistics substantiate the view that the use of social networks has become widely adopted among Internet users, which makes it particularly attractive to marketers as a marketing communication channel.

Because of social networking websites' effectiveness as marketing communication channels, these sites attract both large investors and large advertisers. For example, Microsoft bought a 1.6% stake in Facebook at a cost of $240 million, giving Facebook the dubious valuation of $15 billion (Urstadt, 2008:38). Worldwide it is estimated that social networks generated $11.87 billion in advertising dollars in 2014 (Long, 2013).

These technologies have grown from being one-sided and consumption-based to becoming interactive and collaborative, thus creating new opportunities for interaction between organisations and consumers.

1.2 RATIONALE FOR THE STUDY

One of the consequences of social media's empowerment of its users is that traditional media (the press, television and radio) have become much less effective and less powerful as a communication medium to potential customers (Constantinides, 2008: 217). The consumer is becoming increasingly suspicious of corporate marketing efforts, with the result that the number of consumers attracted by traditional marketing and advertising media is declining. For instance, a few years ago, Constantinides (2008: 218) reported that 61% of US consumers believed that marketing and advertising was out of control. His study found that 60% of consumers at that time had a negative attitude towards contemporary marketing and advertising, while only 18% of the TV audience actually watched TV commercials.

Since then, consumers have increasingly been turning to thousands of social websites where they can interact with other customers when searching for information and advice. This increase in social website usage is not only because of consumers' mounting mistrust of corporate communication, but also because of the weakening of their emotional connection to traditional brands (Constantinides, 2008: 218). Furthermore, Consumer-Generated Media (CGM) like weblogs, online communities, podcasts, social networks and web forums/bulletin boards such as Corporatenarc.com make the customer more informed, educated, sophisticated and more empowered than previously. The customer can make his or her voice heard to a wider audience with the net effect being stronger negotiating power.

This increase in collaboration among users has necessitated a fundamental change in many business models and has re-shaped markets as it empowers Internet retailers (e-tailers), potential customers, current customers and consumer groups (Delayco & Walcutt, 2010: 128). On social media sites, consumers are engaging with and producing information, which is fundamentally different from traditional media

where the marketer is in control of the media message content and of information dissemination.

The challenge for marketers in this new market communication context is to create a venue for conversation with the customer without appearing to control the conversation. In order for the marketer to be this invisible influencer, marketers need to understand the dynamic perceptions, motivations and uses of social network sites. User acceptance theories (Foster, Francescucci, & West, 2010: 4) can be a valuable framework for exploring human behaviour in this computer-mediated environment.

1.3 RESEARCH PROBLEM

The factors that influence the acceptance of social network sites are of interest to a large number of disciplines, including information technology, psychology and marketing. The acceptance and usage of social network sites can be conceptualised as the outcome variables of a psychological process that the user engages with, when making the decision whether or not to accept and use a social network site. It is important to both academic researchers and marketers to understand the determinants of the acceptance or rejection of social network sites so that methods can be developed for designing, evaluating, and predicting how users will respond to new technology (Dillon & Morris, 1996: 8).

As indicated earlier, social network sites and in particular Facebook, are used by a large number of users and the number is still increasing. This growth does not, however, mean that users are insensitive to what they may perceive as negative actions or outcomes from using Facebook. A prime example of the negative effects of the failure to consider the needs of social network users is the Beacon programme, which was launched in November 2007 by Facebook. Facebook founder, Mark Zuckerberg, declared, “The next hundred years will be different for advertising, and it starts today”. Working with commercial websites like Blockbuster and eBay, Beacon tracked Facebook users’ purchases and displayed them to their friends on Facebook. The problem was that users were automatically enrolled in the programme. For example, information about all purchases a user made on eBay was automatically sent to everyone else in the buyer’s Facebook network. Online

petitions and negative publicity within the social network followed, and the programme was quickly scaled down (Facebook, 2011). After this disregard for the privacy perceptions of users, Facebook has experienced strong resistance from some users to any marketing effort that could possibly infringe on their privacy. It is suggested that Zuckerberg's prediction regarding the effect that social networks will have on marketing could still be realised, but only if the motivations and intentions of social network users are taken into account when designing marketing communication messages.

The majority of US web users are concerned about the safety of their personal information, transaction security and misuse of private consumer data. In addition, topics like hacking, fraud, spam, and online scams frequently make headlines, raising security concerns as well as consumer scepticism and mistrust. The physical distance, lack of personal contact and the anonymity of the Internet are also factors that increase the consumers' anxiety and risk perceptions. A recent survey reports a six-fold increase in phishing attacks over the last two years, with three in ten people reporting that they have fallen prey to a phishing attack. The increase of cybercrime on social network platforms has led to a concomitant decrease in trust, which represents what is referred to as a "social network's stock-in-trade". This decline in trust is a major concern for both users and platform owners, demanding an increased focus on the legal and technical approaches to prevent and deter cybercrime (Ramsey & Venkatesan, 2010: 23).

As the importance of online communities continues to grow, a good understanding of the underlying antecedents, namely motivators and barriers, to build and sustain a thriving online community, becomes crucial (Chi, Chan, Seow & Tam, 2009: 233). Foster *et al*. (2010: 7) found that social network users participate in social networks to satisfy a range of different motivational needs and, therefore, social networks must offer a multi-faceted experience that will address a variety of motivations for participation. Li (2007) proposed the concept of a multi-layered perspective and coined the term 'social technographics' to describe the different ways in which consumers may behave online, based on their personality characteristics and circumstances. These 'social technographics', in turn, govern how the users will respond to approaches from marketers via social networking marketing channels. It is, therefore, important to link the motivations and intentions of social network use to

expected social network uses. In this way marketing offerings can be customised consistent with these predictors of usage.

A number of individual aspects relating to the acceptance of information technology have been examined, including cognitive style (Huber, 1983); internal beliefs and their impact on usage behaviour (Ives, Olson & Baroudi, 1983); acceptance as a function of user involvement in systems development (Barki & Hartwick, 1994); type of system development process used (Alavi, 1984); and the process by which technology is implemented and diffused (Brancheau, Janz & Wetherbe, 1996). DeSanctis (1983: 247) found that no individual variable accounts for a sufficient amount of variance in the user acceptance of new technology and, therefore, it is proposed that a multi-faceted approach to acceptance be incorporated into a model in order to better explain the variance of user acceptance.

Sommer (2011: 91) suggests that the Theory of Planned Behaviour (TPB) has proved to be very powerful and effective in explaining human behaviour ever since it was first developed 20 years ago. Apart from the Theory of Planned Behaviour, the Theory of Reasoned Action (TRA) and the Technology Acceptance Model (TAM) are also parsimonious models consisting of either two or three constructs each. However, these theories do not individually satisfy the multi-faceted requirements needed for the investigation of social network usage.

Ajzen (1991: 179) concurs with the multi-faceted view and suggests that human behaviour is complex and favours a multi-dimensional model to predict consumer behaviour. A number of authors, *inter alia,* Compeau and Higgins (1995:189) and Sommer (2011: 91) recommend that additional constructs be added to models predicting user acceptance. Taylor and Todd (1995a: 140) wanted to better understand the relationship between belief structures and its antecedent intentions, and examined ways to decompose beliefs into multi-dimensional constructs. Lin (2008: 433) believe that a decomposed Theory of Planned Behaviour is a much improved method to predict consumer intentions to shop online.

Ardichvili (2008) investigated a model of technology use that included both motivators and de-motivators of social network use, but it was limited to a defined community of practice (i.e. knowledge sharing in virtual communities of practice). Cha (2010) identified factors affecting the use of social networking sites and

focussed on the dimensions of the medium's frequency and amount of use, however, different types of uses were not distinguished.

Foster *et al*. (2010: 4) did investigate the factors motivating participation in social network sites, as well as the barriers limiting social network site participation. The study was, however, limited to a convenience sample of 18-30 year old students from one university, and was restricted to attitudinal aspects only, rather than assessing a comprehensive model.

In a study by Joinson (2008), detailed uses and gratifications were examined, but no attempt was made to link these to any antecedents or 'social technographics'. Kim and Sharon (2010) studied the uses of social networking sites, but no attempt was made to link these to any antecedents either.

Investigating the motivations of individuals' usage or non-usage of online social networks is important. There are parsimonious models exploring a subset of factors to explain the intentions to use or not to use online social network sites, but no comprehensive model exists that includes a collection of the factors of the parsimonious models.

1.4 PURPOSE OF THE STUDY

The preceding discussion of the extant theories of consumers' usage of technology identified the need for developing a comprehensive model to investigate consumer usage in a social network context. Against the background of inadequate theorising and fragmented empirical investigations, the primary purpose of the current study was to develop a multi-construct model to improve the ability to explain the user acceptance of social network sites. The comprehensive model of user acceptance consists of a combination of the Theory of Planned Behaviour and the technological acceptance model as well as relevant constructs of other models, which are applicable to a social media context.

Most academic studies investigating technology acceptance do so from a single perspective only, namely either the motivators or barriers to social network use on the one hand, or the different uses or gratifications of social media use on the other

hand. As far as could be ascertained, a comprehensive, multi-construct model has not yet been empirically investigated in a social network context. Apart from investigating the possible motivators and barriers for using social media, this study also investigated the different uses or gratifications sought from social media usage. It is further suggested that no investigation into the use of social network sites can be complete without the inclusion of the non-users of social network sites, and that a study that only includes users of social networks represents a biased view of these social network sites. The limitation of such an approach is that entire groups of people, often with strong views on the subject, are excluded from the investigation. In order to accommodate both users and non-users of social networking sites in the study, a distinction is made between the *Continued intention to use* social network sites for users and *Intention to use* social network sites for non-users of these sites.

The purpose of the study, or problem statement, was thus to investigate the motivators of and barriers to using social media networks, the specific social uses of social media networks, as well as the systematic differences between users and non-users of social network sites. In addition, the study explored whether both groups were equally likely to join the various types of services that exist on social network sites.

The empirical study was limited to one social network only, namely Facebook. In addition to the fact that Facebook is the biggest social network site, Ellison, Steinfield and Lampe (2007: 1144) suggest that Facebook's heavy usage patterns and its technological capacities (that combine online and offline connections) will provide rich findings for researchers investigating social networks. Given its size, reach and dominance, investigating only this social network was comprehensive enough to glean insights that are equally valid for most other social networks as well.

1.5 OBJECTIVES OF THE STUDY

Based on the stated research problem, the following objectives were addressed.

1.5.1 Primary objective

The primary objective of this study was to investigate social media acceptance by

comparing the intentions of users and non-users of the Internet, in the context of the motivators and barriers of the *intention to use* Facebook. The user and non-user intentions were examined using a decomposed Theory of Planned Behaviour approach and also included an investigation of the gratifications sought from Facebook usage.

1.5.2 Secondary objectives

To address the primary objective, the following secondary objectives were addressed:

1. to describe the nature, history and value of social media;
2. to develop a comprehensive model of the Theory of Planned Behaviour by adding constructs to the original Theory of Planned Behaviour that is relevant in a social media context and to empirically test this model;
3. to identify the uses of social media;
4. to compare the *Continued intention to use* and the *Intention to use* social media between the users and non-users of social media;
5. to investigate the influence of gender and age on a number of social media behaviours, including social network site membership, hours spent on social network sites, social network site visits, and social network site friends; and
6. to compare the number of social media friends between age categories.

To address these objectives, a multi-dimensional model was developed.

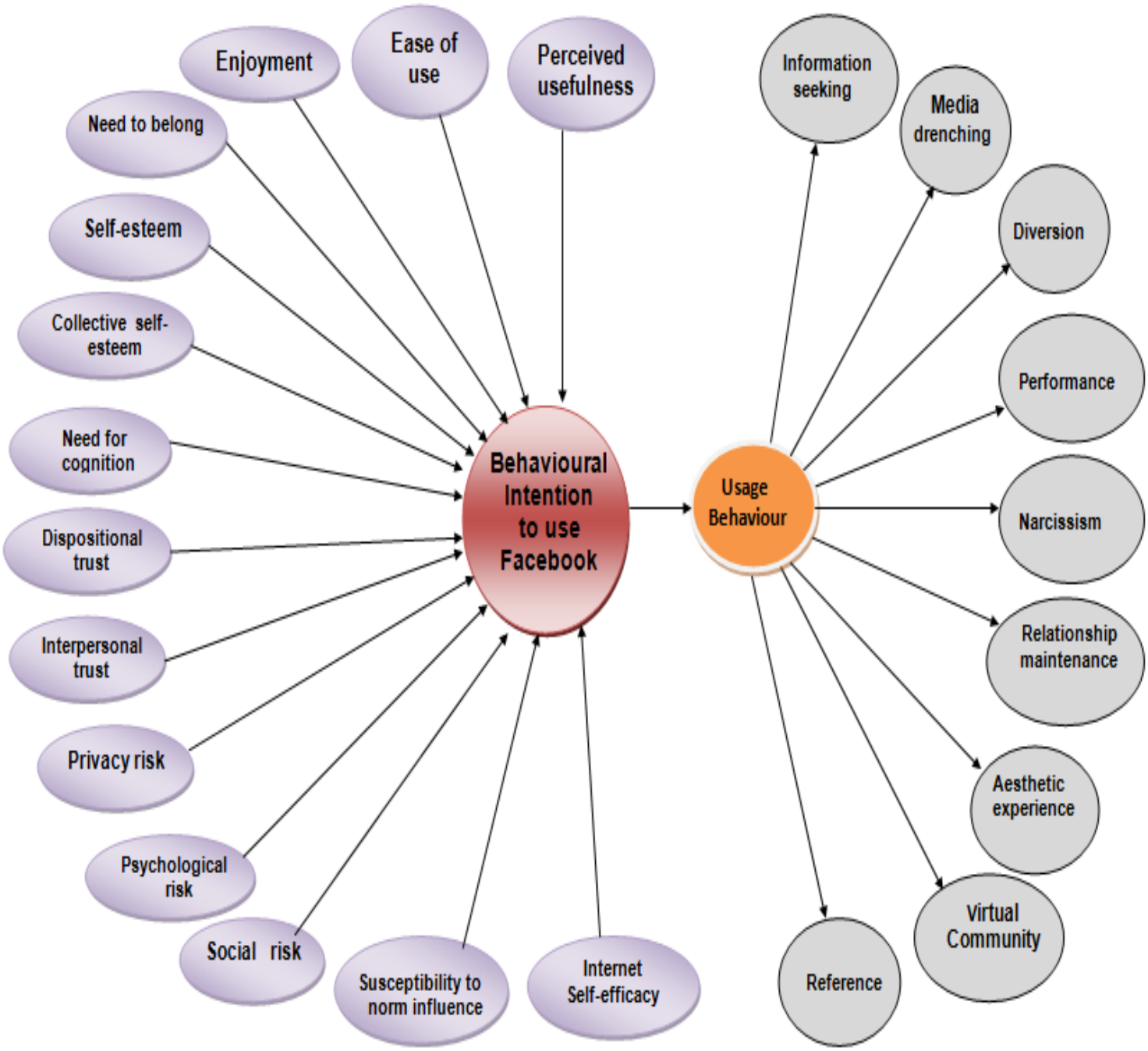
1.6 PROPOSED MULTI-DIMENSIONAL MODEL

There are eight prominent models in the user acceptance literature, namely: the Theory of Reasoned Action, the Technology Acceptance Model, the Motivational Model, the Theory of Planned Behaviour, a model combining the Technology Acceptance Model and the Theory of Planned Behaviour, the Model of Personal Computer Utilisation, the Innovation Diffusion Theory and the Social Cognitive Theory (Venkatesh, Morris, Davis & Davis, 2003: 425). The constructs of these

prominent models were compared and contrasted and the unique and relevant constructs were identified and incorporated in a multi-dimensional model that was used as framework for this study. The proposed multi-construct model is visually represented in Figure 1.1.

FIGURE 1.1

A MULTI-DIMENSIONAL MODEL OF SOCIAL NETWORK USAGE



1.6.1 Operationalisation of model constructs

The constructs of the multi-dimensional model, which also represent the motivators of and barriers to social network use as illustrated in Figure 1.1, are operationalised as follows:

1.6.1.1 Perceived usefulness

Perceived usefulness is the extent to which a user believes that his/her efficiency would improve due to the use of Facebook (Davis, 1989: 320).

1.6.1.2 Perceived ease of use

Perceived ease of use refers to how much a user believes that using Facebook would be effortless, both physically and mentally (Davis, 1989: 320).

1.6.1.3 Perceived enjoyment

Enjoyment refers to how much the users enjoy using Facebook, irrespective of the usefulness of the technology (Davis, Bagozzi & Warshaw, 1992: 1113), while *Perceived enjoyment* also includes the hedonistic satisfaction of entertainment needs (Van der Heijden, 2004: 696).

1.6.1.4 Need to belong

The construct of belonging or the *Need to belong* is the pervasive human driving force to form and maintain a minimum quantity of lasting, positive and significant interpersonal relationships (Baumeister & Leary, 1995: 499).

1.6.1.5 Collective self-esteem

Collective self-esteem, which is also referred to as social identity in the psychology literature, is that part of an individual's self-concept that emanates from his/her sense of belonging to a social group, as well as the value and emotional importance attached to belonging to that group (Tafjel, 1981: 255).

1.6.1.6 Need for cognition

The *Need for cognition* refers to "the tendency to engage in and enjoy effortful cognitive endeavours (Cacioppo, Petty & Kao, 1984: 306).

1.6.1.7 Dispositional trust

The propensity to trust or *Dispositional trust* is the willingness to be dependent on other people in a wide variety of situations (McKnight & Chervany, 2001: 38).

1.6.1.8 Interpersonal trust

Interpersonal trust, in the context of this study, refers to a general trust that a social network user has in the other members of the social network.

1.6.1.9 Privacy risk

Privacy risk is the concern for the theft of private information (loss of control over possible intrusion), or simply the loss of anonymity and control over personal information (loss of control over disclosure), such as when information is used without knowledge or permission (Featherman & Pavlou, 2003: 455). *Privacy risk* includes aspects such as the sharing or selling of personal information, tracking of consumer activities online, placing 'cookies' on browsers, being contacted without consent, and the general invasion of privacy concerns (Miyazaki & Fernandez, 2001: 28).

1.6.1.10 Psychological risk

Psychological risk reflects the disappointment, sense of foolishness or ego loss (Roselius,1971: 58), embarrassment, or loss of self-esteem (Mitchell & Greatorex, 1993: 181), resulting from friends or family knowing that a product or service has failed (Ueltschy, Laroche, Eggert & Bindl, 2007: 412) or that a product or service results in inconsistency with self-image (Chen & He, 2003: 680).

1.6.1.11 Social risk

Social risk refers to the probability that a product will negatively affect the opinion that other people have of an individual, as perceived by that individual. This perception of the views of others is represented by the ego, which is defined as the internal state of self-image control (Chen & He, 2003: 680). *Social risk* varies depending on factors such as a product's social importance and its social conspicuousness (Perry & Hamm, 1969: 352).

1.6.1.12 *Susceptibility to norm influence*

Susceptibility to norm influence refers to the susceptibility of decision-makers towards the influence of reference groups, which are used as standards of comparison for self-appraisal or as a source of personal norms and attitudes.

1.6.1.13 *Internet self-efficacy*

Internet self-efficacy is defined as the belief in one's ability to use motivation, cognitive resources and plans of action in order to satisfy the given demands of a particular situation (Bandura & Wood, 1989: 229).

1.6.2 GRATIFICATIONS SOUGHT FROM USING SOCIAL NETWORK SITES

Hsu (2007: 598) add a number of uses of social network sites and include the following usage dimensions: *Information-seeking, Media drenching, Diversion, Performance, Narcissism, Relationship maintenance, Aesthetic experience, Virtual community* and *Reference*. These constructs are operationalised as follows:

- Factor 1: *Information-seeking* includes aspects such as learning about local community events, getting useful information, finding bargains, and staying abreast of new technology.
- Factor 2: *Media drenching* indicates users' increased usage of online photo albums.
- Factor 3: *Diversion* includes the use of social network sites for any form of entertainment.
- Factor 4: *Performance* refers to users' use of specific media to facilitate discussions of particular persons or things.
- Factor 5: *Narcissism* points to users' desire for increased visibility and knowledge as a basis for performance and their desire to show their special identities not only on the Internet, but also in the real world.

- Factor 6: *Relationship maintenance* focuses on maintaining bonds with existing acquaintances, and not making new friends on the Internet.
- Factor 7: *Aesthetic experience* refers to affective-related gratification.
- Factor 8: *Virtual community* refers to the process where users try to establish a new social life online.
- Factor 9: *Reference* refers to user-generated content as reference, such as a review of a restaurant, or other product.

These variables were incorporated in a comprehensive model to empirically investigate social network usage and non-usage.

1.7 RESEARCH METHODOLOGY

1.7.1 Secondary research

A comprehensive literature study was undertaken to review the extant research of the eminent theories on user acceptance of new technology. These eminent acceptance models were compared in order to identify the common, unique and relevant constructs that were incorporated into a multi-construct model that was used as theoretical framework in this study. The secondary sources consulted for this study included: Sabinet databases; ISAP (National library of South Africa); and SAe Publications; EBSCOhost, Emerald, MasterFile premier, Business Source premier, Academic Source premier; ScienceDirect; UPECAT and Google scholar.

1.7.2 Primary research

A brief overview of the methodology followed is provided in the next section, while a detailed discussion of the research methodology follows in Chapter 6.

1.7.2.1 Target population

The target population of the study consisted of the users and non-users of the social media website, Facebook, in three main South African cities, namely Johannesburg, Cape Town and Port Elizabeth.

1.7.2.2 Sampling method

The sample frame of Facebook users and non-users was not available and the drawing of a probability sample was thus not possible. A non-probability multi-method sampling method was therefore used and consisted of both quota and snowball sampling procedures. A quota sampling method was used to ensure that the demographics of the sample represented that of the study population to enhance the validity of the study.

The study utilised a questionnaire with closed-ended questions to collect demographical information of the respondents. A seven-point Likert scale was selected as the appropriate measurement scale, considering that the variables under investigation were latent and therefore not directly observable. The Likert scaled questionnaire was used to draw a quota sample of 307 users of Facebook and 334 non-users of Facebook.

1.7.2.3 Data collection

The data were collected both electronically by means of the completion of the online questionnaire and physically via the hard copy questionnaire administered by fieldworkers. The online questionnaire was developed using the questionnaire design and hosting programme provided by the Nelson Mandela Metropolitan University (NMMU). The respondents completing the online questionnaire were directed to two separate online versions; one for users and the other for non-users of Facebook, by clicking on either the user or non-user button on the referring website. The online respondents were recruited by means of advertisements on Facebook and Google on a cost-per-click basis in order to target both users and non-users of Facebook.

The hard-copy questionnaires were distributed by fieldworkers mainly by means of a snowball sampling methodology where respondents identified potential additional respondents that were familiar to them, whom the fieldworkers then interviewed.

1.7.2.4 Data analysis

The initial data analysis consisted of a descriptive analysis, using the statistical data analyses programme SPSS 20.0. The descriptive statistics, frequency tables and cross tabulations, were used to compare the number of years of membership, hours spent on Facebook, number of Facebook visits and number of Facebook friends between males and females and between different age categories. The purpose of the frequency table and cross-tabulations was to investigate systematic differences among the demographical data. To assess whether the descriptive analyses were statistically significant, an independent samples t-test and a one-way ANOVA were conducted. An exploratory factor analysis (principal axis estimation with a direct quartimin oblique rotation) was conducted to assess the discriminant validity of the various constructs in the theoretical model, as proposed by Farrell (2010: 325).

The next step was to assess the univariate and multivariate normality of data, followed by assessing the reliability (internal consistency) of each score by using Cronbach's alphas. Additional diagnostics included the average variance extracted (AVE) and an inspection of the squared multiple correlations of indicator variables. These analyses were used to assess the proportion of variance in an indicator, explained by the underlying latent variable.

The measurement model was redefined and the hypothesised relationships in the structural model were assessed using a structural equation modelling (SEM) approach. The computer programme LISREL 8.80 was used for this analysis. Based on these results, a decision was made regarding the rejection (or not) of the stated hypotheses.

The motivation for group membership (i.e. user or non-user of Facebook) was further examined using a logistic regression to calculate the probability of group membership changing with a one-unit change of an independent variable and finally, the gratifications or outcomes sought from Facebook use were analysed using independent samples t-tests.

1.8 CONTRIBUTION OF THE STUDY

Social network sites are unique in nature because, unlike organisational websites, social network sites are made up of user-generated content. Social network sites only provide the infrastructure for the users to contribute their own content. The interconnectedness that Web 2.0 allows has contributed to a large extent to the popularity and growth of these social network sites. The interconnectedness of the consumers combined with the social network platforms provided to consumers contributed to a shift of commercial power from the marketer to the consumer. Marketing changed, to a large extent, from push marketing to pull marketing by engaging potential consumers in conversation regarding their products, rather than trying to remind, inform and persuade them by traditional interruption marketing.

The unique nature of online social networks is changing the way this medium is used for marketing communication, given the shift of commercial power from the marketer to the consumer. In order for marketers to utilise the opportunities that this substantially engaged or involved market holds, marketers need to understand how users of social network sites respond to different marketing mixes. To do so, calls for an investigation of the reasons for social network use. These reasons can be investigated by examining the motivations and intentions of users of social network sites and also by examining the specific uses of social network sites.

From an academic point of view, this study makes a significant theoretical contribution to the body of academic knowledge by: firstly, investigating the antecedents to social network use; secondly, linking the antecedents of social network use with the *Continued intention to use*, or *Intention to use* social networks of both users and non-users of social networks respectively; thirdly, linking the antecedents of social network use to different categories of social network gratifications sought, and lastly, to assess whether there were systematic differences between users and non-users of social network sites.

The empirical results of this study revealed the actual negative experiences of users of social networks, as opposed to the negative publicity of social networks reported in the media. These empirical results can serve as a basis to assist parents, law makers, educational decision-makers, librarians, marketers, entrepreneurs,

academics and ultimately the users themselves, in making an informed, educated choice as to what represents acceptable social media interaction.

Marketers have found that the unique nature of the Internet, as well as that of social network sites, with user-generated content, collaborative word-of-mouth and the resulting lack of control over the media message, necessitates a unique marketing approach to social media marketing. This study serves as a managerial guide by providing practitioners with a range of antecedents to social network use, so that marketers can predict social network use based on these antecedents, thereby customising multi-layered marketing offerings to encourage the use of social network sites for e-commerce purposes.

1.9 ORIENTATION OF THE STUDY

The orientation of the study is as follows:

Chapter 1 – Introduction, problem statement and demarcation of the study

This chapter puts the research in context and illustrates the research problem and importance of the research. In addition, this chapter also explains the research design that was followed.

Chapter 2 – An overview of the development of marketing thought

The development of marketing thought over time is discussed in detail in this chapter in order to place Internet marketing in perspective.

Chapter 3 – Social network sites in a marketing context

In this chapter, a thorough overview of the development, nature and value of social networks is provided.

Chapter 4 – Theories on the acceptance and usage of new technology

The development of theories attempts to predict the acceptance and use of new technology are discussed in this chapter.

Chapter 5 – A decomposed, multi-dimensional model of the Theory of Planned Behaviour

In this chapter, the elements of the expanded decomposed model of the Theory of Planned Behaviour are set out.

Chapter 6 - Research design and methodology

The research design, operationalisation and data gathering methods used in the study are presented in this chapter.

Chapter 7 – Empirical results and findings

The data analysis using the design and methods covered in Chapter 6 are discussed in this chapter, and the results of the study are related to the stated objectives.

Chapter 8 - Findings, conclusions and recommendations

In this final chapter, the findings of the research results are interpreted, conclusions are drawn, recommendations are made, and areas of future research are suggested. The limitations of the study are also discussed.

1.10 SUMMARY

The use of social media as a unique marketing communication tool to engage with a new age of consumers has become an essential element of any organisation's strategic planning. As with all marketing processes, satisfying the needs and wants of consumers should form the basis of any strategic marketing planning. The needs and wants of the consumers that are satisfied by means of the usage of social network sites can be investigated by analysing the motivators and reasons for using social network sites. In addition to the motivators for using social network sites, the actual reasons why social networks are used can also contribute to a better understanding of the needs and wants being satisfied by using social network sites. The objective of this study was to gain an understanding of the motivators and barriers that determine the intention of users to use social network sites, as well as investigating the actual uses of social network sites. These aspects of social networks were investigated by means of a thorough literature review in order to develop a decomposed model of the Theory of Planned Behaviour that was used to empirically investigate the objectives of this study. The study makes both an

academic contribution, by testing a new model of user acceptance, and a managerial contribution, by providing insights into the aspects that satisfy the needs and wants of the users of social network sites.

Chapter 2

AN OVERVIEW OF THE DEVELOPMENT OF MARKETING THOUGHT

2.1 INTRODUCTION

Human beings are constantly attempting to attain and maintain a state of optimum contentment by the satisfaction of their unlimited needs and wants with the limited resources at their disposal. These human needs and wants are satisfied by means of the provision of goods and services provided by many organisations, including businesses. Using the process of business management, businesses attempt to effectively and efficiently transform resources, and thereby maximise the provision of goods and services and satisfying the needs and wants of customers. Businesses communicate information regarding the goods and services they offer by the process of marketing communication.

Marketing communication takes on many forms and makes use of a variety of communication media. Currently, the fastest growing marketing communication medium is electronic communication, which has grown in importance as a potential source of competitive advantage for most businesses. A specific platform for electronic communication, namely social networks, has also emerged as a potential important marketing communication medium for marketers

The purpose of this chapter is to contextualise this study within the business management field of study. The chapter starts by investigating needs satisfaction as the reason for the existence of business organisations, which is followed by a discussion of the tasks of management and the organisational functions to be performed in a business. The organisational function, namely marketing, as a specific field of study, is defined and its development over time is also discussed. The Internet as type of marketing communication is outlined next, followed by a discussion of e-commerce and the importance of it in the current business environment.

2.2 NEEDS SATISFACTION AS THE DISPOSITIONAL HUMAN CONDITION

The well-known psychologist Abraham Maslow identified five sets of basic human needs: physiological needs, safety needs, the need for love, esteem needs and self-actualisation. In addition to these five sets of needs, Maslow identified the human disposition and desire not only to satisfy these needs, but to maintain the conditions upon which the satisfaction of these needs rely. These basic human needs are arranged "in a hierarchy of pre-potency", which means that human beings endeavour to reach the higher levels of satisfaction (such as self-actualisation) only after the more basic human needs have been satisfied. Maslow concluded that "man is a perpetually wanting animal" (Maslow, 1943: 370).

The philosopher and economist Adam Smith, in his seminal work the *Wealth of Nations* (Smith & McCulloch, 1863), stated that human needs and wants are satisfied by means of human labour. He argued that everyone, who is able to work, does so with skill, dexterity, and judgement, in order to individually or collectively provide necessities, as well as the conveniences of life, for himself and for his family. Smith referred to the collective effort of the individuals of a particular nation as the annual labour of the nation, which consists of the collective output of goods and services produced. Smith further posited that the combined labour of a society is so great that all workmen could abundantly share in the necessities and conveniences of life, that is, if the collective is frugal and industrious (Smith & McCulloch, 1863: 1).

Burrow, Everard and Kleindl (2007: 53) posited that all societies face the challenge of trying to satisfy unlimited needs and wants of their citizens with limited resources. The situations where these three sources are limited are referred to as scarcity. The concept of scarcity inevitably leads to choice, where individuals need to choose which needs and wants should be satisfied considering the limited resources at their disposal. This problem of scarcity is common to all societies. Different societies have, however, developed different systems as to who makes decisions in terms of the quantities and types of products and services to be produced to satisfy citizens' needs and wants.

The study discipline that investigates the production of goods and services to satisfy human needs and wants is called economics, and the different systems that were developed by different societies to satisfy these needs are referred to as economic systems. Economics explores the producing, distributing and consuming of goods and services as well as how these activities are coordinated in the economy (Krugman, Wells & Graddy, 2010: 4). Most modern economic systems consist of market systems, which are a combination of free-market activities and government intervention. In a free-market system, individuals are free to decide what to produce, how to produce it, and at what price to sell it, whereas with a government-regulated system, government regulates production distribution and pricing (Pride, Hughes & Kapoor, 2012: 4).

In the discipline of economics, the ability of a product or service to satisfy a need is referred to as utility. Four common types of utility exist, namely: form, place, time, and possession utility. Anyone who creates utility is referred to as a producer of goods and services. Producers are rewarded for the utility and value that are added to a product or service (Burrow *et al*., 2007: 53).

The separately identifiable units that are responsible for adding the utility and value to products and services, and that decide who receives the rewards when doing so are referred to as businesses. Businesses are responsible for the functioning of an economic system by means of the combination and transformation of resources into what is referred to as ‘needs and wants satisfying goods and services’. A resource is described as anything that can be used in the production of goods and services. In a business context, the input sources are referred to as factors of production, comprising four main types namely, land, labour (the time of workers), capital (machinery, buildings, and other man-made productive assets), and human capital (the educational achievements and skills of workers) (Krugman *et al.*, 2010: 5). The people in business units responsible for making production decisions are generally referred to as managers, while the process used to produce goods and services efficiently, effectively and productively are referred to as management.

2.3 DEFINITION OF MANAGEMENT

Management attempts to realise the goals set by a specific organisation efficiently and effectively. In order to do this, activities must be planned, decisions must be made, the activities must be organised, managed and controlled. These activities can only be completed productively if the resources of the organisation are used effectively and efficiently. In other words, the four basic managerial functions must be performed: planning and decision-making, organising, leading and controlling (Griffin, 2012: 5).

Two important aspects of management identified in this definition are the concepts of effectiveness and efficiency. According to Griffin, (2012: 5), effectiveness refers to making the right decisions and successfully implementing these decisions, whereas efficiency refers to the wise and cost-effective use of the sources and the elimination of any and all forms of wastage. Daft (2011: 4) describes effectiveness as how comprehensively and successfully a specific goal is realised by the organisation and efficiency refers to how many resources were used in order to realise this goal. Effectiveness has a direct influence on the efficiency of a business, and efficiency has a direct influence on the output of goods and services that can be produced with a given input of factors of production.

This relationship between the output of goods and services and the input of factors of production is referred to as productivity. An increase in productivity means that more needs and wants can be satisfied with a given input of resources. Therefore, increased productivity is an important goal of the management process.

2.3.1 Management as a liberal art

The well-known management expert, Peter Drucker, points out that management is not only confined to businesses, but is present in all forms of organisations, including governmental organisations, private organisations, and both for-profit and non-profit organisations. Drucker further highlights the importance of the human element in management and refers to management as a liberal art, because “it deals with the fundamentals of knowledge, self-knowledge, wisdom, and leadership” (Drucker & Maciariello, 2008: 25).

2.3.2 The evolution of significant management perspectives

In the 1850s, when the German philosopher and economist, Karl Marx, started with his work, *Das Kapital*, the concept of management did not exist. In the two centuries following his work, management underwent a tremendous revolutionary development, which is echoed by the words of Drucker and Maciariello (2008: 18):

> …rarely in human history has any institution emerged as quickly as management or had as great an impact so fast. In less than 150 years, management has transformed the social and economic fabric of the world's developed countries. It has created a global economy and set new rules for countries that would participate in that economy as equals. And it has itself been transformed.

The management process is influenced by the environment within which it functions and *vice versa*. It follows, therefore, that the process of management is dynamic in nature, constantly evolving and influenced by factors, both internal and external to the organisation. In order to gain a better understanding of the concept management and also to anticipate possible future changes, one needs to understand how management has changed over time. As Daft (2011: 36) points out, there are a number of distinct perspectives on the development of management thought.

2.3.2.1 The classical perspective

Management, as a distinguishable structured process, can be traced back to as far as 3000 B.C. when the governments of Sumeria and Egypt were well organised and functioning effectively. The scientific study of management, however, is fairly new, dating back less than 200 years. The first perspective on management to emerge during the 19th and early parts of the 20th century is called the classical perspective. This perspective focussed on a rational scientific approach to management. The classical perspective consists of three sub-fields: scientific management, bureaucratic organisation and administrative principles (Daft, 2011: 36).

Scientific management consists of the development of precise management procedures based on the scientific study of individual situations in order to improve productivity. The bureaucratic organisations consist of clearly defined authority and responsibility and emphasise the interpersonal and rational basis of management. Administrative principles focus on the productivity of an organisation as a whole and

demarcate the management functions of planning, organising, commanding, coordinating and controlling (Daft, 2011: 37-40).

2.3.2.2 The humanistic perspective

In direct response to the social and political pressure for better treatment of employees, the humanistic perspective of management emerged in the late 19th century. This perspective emphasises the understanding of human behaviour, needs and attitudes of employees in the workplace and consists of the sub-fields of human relations movement, a human resources perspective and a behavioural sciences approach (Daft, 2011: 41).

The human relations movement focuses on the satisfaction of basic needs as a key element to increase employee productivity. The human resources perspective is a combination of motivation theory and task design and is based on the belief that jobs should be designed to meet higher level employee needs by allowing them to use their full potential. The behavioural science approach draws from a variety of study disciplines in social sciences, including economics, psychology and sociology in order to develop theories about human behaviour and interaction in an organisation (Daft, 2011: 42-45).

2.3.2.3 The management science perspective

The management science perspective was developed as a consequence of the World War II efforts of several mathematicians and physicians to solve military problems, and in particular how to effectively and efficiently move large amounts of sources around on the battlefield. After the war ended, many of the mathematical tools developed for the military forces, such as linear programming and statistical process control, were adopted by businesses.

2.3.2.4 Recent management developments

Drucker and Maciariello (2008: 1) believe that “management may be the most important innovation of the twentieth century”, and that the optimal management of the so-called knowledge workers in a “knowledge society, society of organizations and a networked society” will be the greatest challenge of the new millennium. Daft (2011: 50) adds to this sentiment emphasising that organisations are currently

transitioning to a technology-driven workplace and that there is a huge reliance on technology to communicate with customers and to collaborate with other organisations.

2.3.3 Organisational environment

Drucker earlier referred to the radical influence of technology on the evolution of management. It is important, however, to note that management and organisations are influenced not only by technology, but by a whole range of other internal and external factors. According to Bosch, Tait and Venter (2011: 40), two distinct business environments can be identified that could positively or negatively influence the realisation of an organisation's goals, namely the internal environment (micro environment), and the external environment, consisting of the market environment and the macro environment.

The main factors influencing the internal operation of a business are: the vision, mission, and core values, organisational functions, factors of production, organisational culture, management style, business policy, business ethics and employees. The market environment, involving external factors that have a direct and unique influence on a particular organisation, consist of consumers, competitors, intermediaries and suppliers. The macro-business environment factors have an influence on all businesses in general and consist of economic factors, socio-cultural factors, demographic factors, institutional factors, political factors, physical factors, international factors and technological factors. In order for an organisation to be successful, all these factors need to be taken into consideration and optimised in the most effective and efficient manner if the organisation wished to profitably maximise its production of goods and services.

2.3.4 Organisational functions

One of the key internal, organisational factors, identified by Bosch *et al.* (2011: 40) refers to the way that activities in an organisation are organised. Two primary approaches towards organising organisational activities can be identified, namely the systems approach, which divides the organisation into separate parts that are

managed separately, and secondly, the functional approach, which groups related activities together into separately identifiable, primary functions.

The first identifiable function is the general and strategic management function that consists of the setting of the vision, mission, goals and objectives that organisations strive towards. A logical next step in the process is the procurement of financial resources, before the other functions can be organised. This process of managing finances is referred to as financial management. The financial resources are then utilised to attract the required employees that were identified, to perform all identified organisational tasks. This function is referred to as human resources management. In order for the organisation to produce goods and services, inputs in the form of raw materials and services need to be sourced as effectively and efficiently as possible. The organisational function responsible for this is referred to as purchasing and inbound logistics management. The resources procured by purchasing and logistics are then transformed into outputs by the production and operation management function, followed by the marketing function that is responsible for the profitable exchanges with consumers.

2.4 THE EXPANDED MARKETING PROCESS

Kotler and Keller (2011: 30) offer a social definition of marketing by describing it as a process based on society where individuals and groups create, offer and freely exchange valuable products and services with other people or groups in order to get what they need and want. The two authors also provide a management-related definition where marketing focuses on electing, acquiring, fostering and growing target markets by giving the customer a product superior in creation, delivery and communication.

The marketing process begins with identifying and understanding customer needs, wants and demands, by means of a thorough process of searching and managing market information and customer data. The starting point of any marketing strategy is human needs and wants. Human needs can be described as the state of perceived deprivation and forms part of the basic human make-up. Wants as a form of human needs are influenced by culture and personality and are shaped by a

particular society in terms of which objects should satisfy their needs. Consumers demand products and services with perceived benefits and characteristics that will optimally satisfy their needs and wants.

The second step in the marketing process consists of designing a customer-driven marketing strategy, which consists of: grouping together consumers with common characteristics based on chosen criteria (market segmentation); choosing the segments which have needs and wants that best fit the internal capabilities of the organisation (targeting); and creating perceived value for the consumer by establishing a clear, distinctive and desirable image for the market offerings (positioning) that are different (differentiation) from the market offerings of competitors.

The third step in the marketing process is the creation of an integrated marketing programme for the development of needs and wants that satisfy the marketing mix. The marketing mix consists of the unique combination of products and services; pricing at a level at which consumers will perceive value; the distribution of the goods and services to the consumer by creating value chains, and lastly, the promotion of the goods and services, thereby communicating the value to consumers.

The fourth step, and the last step in creating value for consumers, consists of building long-term profitable relationships with consumers by means of customer relationship management up-and-down the value chain.

The final step in the marketing process consists of capturing value from the consumer, seeing that marketing is a mutually beneficial process for both the organisation and the customer. In addition to simply capturing the value from the consumer in the short term, organisations also endeavour to create loyal customers for life and thereby increase their market share over the long term.

The marketing process should take place within an environment that enhances effectiveness, efficiency and ultimately productivity and, therefore, using marketing technology forms an essential part of any marketing process.

2.5 THE INFLUENCE OF TECHNOLOGY ON MARKETING

Kotler and Keller (2011: 34) believe that the current market is “dramatically different from what it was even 10 years ago”. They identify the following 12 key societal forces that have resulted in new marketing behaviours:

- The deregulation of a number of industries in many countries has led to greater competition among organisations, but has also resulted in growth opportunities in new geographical markets.
- The privatisation of public companies to private ownership and management, with profit as its objective, has led to an increase in efficiency.
- Increased competition in both domestic and foreign markets is raising marketing costs and putting pressure on profit margins. The advent of mega-brands in many industries has become a significant competitive threat.
- Industry convergence as a result of overlapping market opportunities driven by ‘digital technology’ is creating significant opportunities and threats to many organisations.
- Retail transformation in reaction to the competition that store-based retailers are facing from catalogue houses, direct mail firms, newspapers, magazines, television direct-to-customer advertisements, home shopping television, and especially e-commerce.
- Disintermediation in the delivery of products and services by intervening in the traditional flow of goods in a distribution channel by so-called ‘dot-com’ mega-brands such as AOL, Amazon.com, and eBay, are causing the traditional distribution channels to be re-examined.
- Consumer participation in the design of marketing offerings and thereby increasing consumers’ sense of connection with and ownership of organisations are becoming increasingly commonplace, due to the popularising of expressing a private opinion publically, by means of social media.
- Globalisation and the resulting global village have become more prevalent due to advances in technology, transportation, shipping, and communication, which are reducing the barriers to entry for marketers in many markets.

- Consumer information regarding almost anything is available to consumers, 24 hours a day, seven days a week. The development of personal connections and the contribution of user-generated content has grown exponentially on social media platforms such as Facebook, Flickr (photos), Wikipedia (encyclopaedia articles), and YouTube (video).
- Consumers are developing a resistance to undesirable forms of marketing, such as interruption marketing and are becoming less loyal to brands and more price sensitive as they perceive very few differences in the market offerings of some organisations (Kotler & Keller, 2011: 35-37).
- Network information technology, which has sparked off a digital revolution and heralded the new information age. Network information technology uses computing power to improve the accuracy of production levels, precisely targeted and customised communications, and dynamic pricing.
- Consumer buying power via the Internet has substantially increased due to the ability to compare and review product or service information quickly and efficiently. This increase in buying power has resulted in a radical change in price determination.

The catalyst behind many of the key societal forces mentioned here is the development and growth of the Internet. Its effect on how we live and work is extensive and the tempo of change brought about by the Internet is increasing exponentially (Burrow *et al.*, 2007: 190).

2.6 THE INTERNET REVOLUTION

The global network of interconnected, electronic, wireless and optical networking technologies, called the Internet, and its current application, the World Wide Web or www, uses hyperlinks and packet switching to enable the average consumer by means of a graphic user interface to easily transfer data and information from one computer to another computer anywhere in the world, almost instantaneously.

The Internet originated as a military project in the 1960s as a way to avoid communications being destroyed during a nuclear attack. A group of engineers from the Advanced Research Projects Agency (ARPA) developed an elementary version

of what is now known as the Internet. A number of American universities used this network in the late 1960s to communicate and transfer data and documents to one another electronically. However, it was difficult to use initially and it was only after the development of the graphic user interface, which made it simple to use, that the Internet gained general acceptance and started to grow exponentially (Baltzan, Phillips, Lynch & Blakey, 2009: 67).

The Internet is now commonly used to send e-mails, visit websites, participate in discussion groups, communicate with other employees, buy online, chat on or join a discussion group, seek information, compare products, make phone calls, download music, post photos and update computer software. It is claimed that "Internet uses are virtually unlimited" (Burrow *et al.*, 2007: 194) - including the fact that it can be a means of doing business electronically.

2.7 DEFINITION OF E-BUSINESS

E-business is operationalised as using digital technology to enhance activities and processes across an entire business to increase the effectiveness and efficiency of all activities involved in producing needs and wants satisfying goods and services (Pride *et al.*, 2012: 470). E-business, therefore, is the encapsulating term for all business activities that fundamentally rely on digital technology to function. E-business includes a wide variety of activities, including the following:

- e-auctions;
- e-banking;
- e-commerce;
- e-directories;
- e-gambling;
- e-learning;
- e-mailing;
- e-marketing;
- e-money; and
- e-trading.

Of this wide range of e-business activities, e-commerce is of particular interest. E-commerce focuses specifically “on transactions that includes buying/selling online, digital value creation, virtual marketplaces and storefronts, and new distribution channel intermediaries” (Strauss, Frost & Ansary, 2009: 28).

Based on the different relationships that exist between organisations and consumers, Baltzan *et al.* (2009: 76) identify five types of e-commerce. These are: business-to-business (B2B), business-to-consumer (B2C), consumer-to-business (C2B), consumer-to-consumer (C2C) and business-to-government (B2G).

The worldwide economic crisis in 2007 during which many financial institutions collapsed, along with a general deterioration of consumer wealth and the depression of the world economy, has resulted in organisations exploring many possible sources that could give them a competitive advantage. One such source of competitive advantage is e-commerce, which utilises the unique capabilities of the Internet to improve the effectiveness, efficiency and productivity of business activities, and thereby gaining a competitive advantage (Němcová & Dvořák, 2011: 1292).

2.8 IMPROVED BENEFITS PROVIDED BY THE INTERNET

Kotler and Keller (2011: 37) identify a number of benefits that the Internet provides for business activities. These benefits include the following:

- Marketers can use the Internet as powerful information and sales channel, given that the Internet transcends the boundaries of time and space and allows businesses to reach markets worldwide.
- Marketers can collect more detailed information regarding consumer behaviour about markets, customers, prospects, and competitors. The Internet also provides marketers with a number of ways to gather both demographic and actual purchasing, preference and usage statistics of consumers.
- Marketers can monitor and use social media to communicate their brand message by providing information and updates regarding products and services to consumers via blogs and other postings.

- Marketers can facilitate and increase the speed of external communication among customers by integrating online and offline brand advocates and also create a buzz for the organisation's goods and services by using social network sites.
- Marketers can send advertisements, coupons, samples, and information to customers who have requested them or given the company permission to do so. By means of individually personalised marketing messages, organisations can reach micro-target markets.
- Marketers can reach consumers anywhere, anytime with mobile marketing, by using global positioning systems and cellular phones to provide consumers with location-based advertising based on the consumers' movements.
- Organisations can make and sell individually differentiated goods. Advances in computer software and database marketing make it possible for organisations to individually customise marketing offerings for individuals based on both their characteristics and behaviour.
- Organisations can improve their purchasing efficiency, recruitment procedures, training processes, and internal and external communications. The Internet can be used to recruit and attract new employees and also be used to provide them with online training.
- Organisations can improve their cost-efficiency by the skilful use of the Internet. The Internet can be used to source operational inputs at the best prices by using shopping 'bots' and other Internet tools, such as reverse auctions, to increase efficiency, reduce costs and increase profitability.

The unique characteristics of the Internet provide marketers with a collection of improved capabilities and resources to improve their strategic and functional business processes. A specific business process, business communication, benefits greatly from the ubiquitous and dynamic communication opportunities provided by the Internet. One such communication opportunity provided by the Internet is the increased connectivity and communication between users. This increased connectivity of the Internet provides a platform for the development of social networks, which are used by billions of Internet users and are, therefore, increasingly important to marketers.

2.9 SOCIAL NETWORKING

A revolutionary step in the growth of the Internet was the development of Web 2.0, which is a technical platform that allows for the formation and distribution of messages and content across different networks (Berthon, Pitt, Plangger & Shapiro, 2012: 262). Web 2.0 paved the way for the development of social network communities that allow for and encourage two-way communication and allow the creation of an online identity, where people create and distribute information, ideas and opinions across many different channels with “friends, fans, followers or connections” (Pride *et al.*, 2012: 462). Social networking satisfies many human needs and wants effectively and efficiently and, therefore, it has grown substantially. For example, the largest social network site, Facebook, has flourished from a few hundred Harvard students to more than 1.3 billion active users (*Facebook Statistics*, 2014).

The sheer numbers of active social network users have created several opportunities for organisations to use social networks as a communication medium. Social network sites allow marketers to provide the traditional international marketing communication opportunities of creating and sharing information with consumers about products and services via blogs, bulletin boards, videos, photos, webinars, wikis and podcasts. In addition, by means of monitoring social networking sites, organisations are given honest feedback regarding the organisation’s products and services.

The exponential growth of social networks provides marketers with a platform to inform social network users of their product offerings, while the platform can also be used for consumer feedback, which marketers can use to adapt their future product offerings.

2.10 THE DEVELOPMENT OF SOCIAL NETWORKS

The concept social network site has developed rapidly over the past two decades, progressing from word-of-mouth conversations, to broadcasting, and to user-generated content provision. The World Wide Web evolved from a simple one-

directional communication medium to a complex synchronous and asynchronous multi-directional communication medium (Kasavana, Nusair & Teodosic, 2010: 68).

In order to understand the impact of social networks on the social topology, one needs to understand the historical development of social networks. The following analysis by Boyd and Ellison (2008) provides a comprehensive overview of the rise and fall of social networks during the past decade.

2.10.1 The early years

Launched in 1997, SixDegrees.com was the first recognisable social network site. Initially, this network site only allowed users to create a profile and list their 'friends', but in 1998 users were also able to view their friends' 'friend lists'. However, these features existed in some other form before SixDegrees.com. For example, ICQ had lists of friends, but these friends were not visible to other users. Classmates.com made it possible for people to affiliate with their high school or college friends, but users could not create profiles or search the lists of friends of their classmates. For many years SixDegrees.com was the only social network to combine all these features.

During the period 1997 to 2001, various combinations of profiles and friend lists allowed users to create personal, professional and dating profiles. Users had the ability to identify friends to add to their list without having to request permission. Some of the larger social network sites that emerged were Asian Avenue, BlackPlanet, MiGente and LiveJournal. LiveJournal's creator suggested that friend lists were created based on so-called instant messaging buddy lists in order to follow their friends' personal journal entries.

The next wave of social network sites followed with Ryze.com, which was launched in 2001 as a business networking site. Ryze.com was started by its founder as a way of connecting the business, technology, entrepreneurial, and investor communities in San Francisco. Ryze.com, Tribe.net, LinkedIn, and Friendster.com, formed a close personal and business relationship, and held the belief that they could support one another personally and professionally without competing (Festa, 2003). Ryze.com never obtained mass popularity, Tribe.net attracted a passionate niche user base, LinkedIn became a powerful business service network, but Friendster will be

remembered as one of the biggest “disillusions in Internet history” (Chafkin, 2007).

2.10.2 The rise and fall of Friendster

Friendster.com (hereafter referred to as Friendster), was launched in 2002 to be the social complement to Ryze.com and also to compete with Match.com, which was a profitable online dating site (Cohen, 2003). It is the goal of most dating sites to introduce people to strangers with similar interests. With Friendster, however, the goal was for friends-of-friends to meet as it was assumed they would make better romantic partners than would strangers.

As a result of the rapid increase in users, Friendster started to experience both technical and social difficulties (Boyd, 2006). The servers and databases were not designed to accommodate the large number of users and users regularly experienced technical difficulties. These technical difficulties frustrated the users greatly; especially those that replaced their e-mail communication with Friendster. The popularity of Friendster proved to be both positive and negative. The larger number of users joining Friendster had a snowball effect, as friends became friends of friends. The rapid growth in the numbers on Friendster not only led to technological difficulties, but also to social difficulties, which prompted Friendster to restrict the activities of its most passionate users. Friendster was designed to restrict users from viewing the profiles of friends of friends if they were more than four degrees separated from them. In order to overcome this restriction, users began to add acquaintances and strangers to their profile. A number of users even attempted to collect as many friends as possible to their profiles. The most effective friend collectors made use of fake profiles that included fictional characters, celebrities and the like. These fictional profiles were called ‘Fakesters’. The Fakesters annoyed the creators of Friendster and caused fake profiles to be banished from Friendster. In doing so, Friendster eliminated one of the most popular features on Friendster as many users enjoyed surfing the Fakesters.

The process of deleting the Fakesters and also accidentally deleting the profiles of genuine users, who used a non-realistic photo, signalled to users that Friendster did not share the users’ interests and resulted in their loss of trust in Friendster. The

loss of trust, combined with the technical and social difficulties, caused many early adopters to leave Friendster (Boyd, 2006).

2.10.3 Social network sites as marketing communication tool

A plethora of new social network sites were launched from 2003 onwards. This proliferation of social network sites prompted Shirky (2003) to coin the term YASNS, short for 'Yet Another Social Networking Service'. Most of the new sites copied the profile-centric architecture of Friendster or targeted a specific demographic.

MySpace was differentiated from other social network sites by means of the addition of features as demanded by their users (Boyd, 2006), as well as allowing users to personalise their pages. Users were able to do this because MySpace allowed users to add HTML to their profile pages. This had the effect of creating a culture of copy/paste of code in MySpace.

The large influx of teenagers joining MySpace started in 2004. The main motivation for teenagers to join at that stage was to connect with their favourite bands and also because of referrals by older family members. As more teenagers joined, they encouraged their friends to join as well which resulted in a rapid growth of MySpace. Unlike many other social network sites, MySpace did not reject underaged users, but instead, changed its user policy to accommodate them.

2.10.4 Social network sites as a global phenomenon

At first, MySpace was the dominant social network site in the United States and attracted most of the media attention globally, but it was not the social network of choice in many other countries. Friendster gained popularity in the Pacific Islands, Orkut became the premier social network site in Brazil before growing rapidly in India (Madhavan, 2007), Mixi attained widespread adoption in Japan, LunarStorm took off in Sweden, Dutch users embraced Hyves, Grono captured Poland, Hi5 was adopted in smaller countries in Latin America, South America, and Europe, and Bebo became very popular in the United Kingdom, New Zealand, and Australia, Skyrock reigned in France, and Windows Live Spaces dominated several markets worldwide, including Mexico, Italy, and Spain. A number of social network sites such as QQ, Orkut and

Live Spaces were just as large as MySpace, but because they did not attract much media attention from the English-speaking media, it is difficult to gauge their development.

2.10.5 Expanding niche communities

In addition to the large open social network sites, a considerable number of other social network sites developed, specifically those organised around specific niche demographics. One such niche demographic was college students for whom Facebook was specifically designed. Facebook was started in 2004 as a Harvard university-only social network site (Cassidy, 2006). The only people that were allowed to join Facebook then were those with a Harvard.edu e-mail address. Later on Facebook expanded to also include other universities but all users were required to have University e-mail addresses in order to join, which created the perception of an intimate, private community.

In September 2005, Facebook expanded to high school students, later professionals inside corporate networks followed, and, eventually, everyone could join. At present, Facebook has more than 1.3 billion active users (*Facebook Statistics*, 2014). The change from a small, intimate community to a social network open to everyone, does not mean that users have access to the user profile of all Facebook users. In order to view the user profile of another user, the process of requesting and accepting a 'friend' request has to be completed to view the other person's user profile. One of the main attractions of Facebook is the ability of outside role players to develop applications for use in the Facebook infrastructure.

The rapid growth of social network site membership prompted many organisations to invest in this medium. On the other hand, many organisations are restricting access to social network sites as they believe it affects productivity. The US military banned soldiers from accessing MySpace (Frosch, 2007) and the Canadian government prohibited employees from using Facebook (Benzie, 2007), while the US Congress has proposed legislation to ban the youth from accessing social network sites in schools and libraries.

The rise of social network sites has resulted in a shift of how on-line communities organise themselves. While there still are many websites organised around

communities of interest, the primary concern of social network sites and people are not interests. Early online communities were structured according to topics and topical hierarchies. Social network sites, on the other hand, are structured as personal or egocentric networks of individuals. It can be argued that social network sites more accurately reflect real-world social structures as society is made up of networks and not groups (Wellman & Berkowitz, 1988: 37). There are many types of social networks that serve the needs of a multi-faceted society.

2.11 TYPES OF SOCIAL NETWORKS

Various types and forms of user-generated content sites exist, ranging from bulletin boards and discussion forums to current-generation sites, such as Facebook, MySpace, YouTube, and Flickr (Kasavana *et al.* (2010: 68). A common characteristic of most types of user-generated content sites is that they provide users with some way of communication and connection with one another. According to Kasavana *et al.* (2010: 68), all user-generated content can be divided into two broad categories, namely business-related (e.g., LinkedIn) and social-related (e.g., MySpace, Orkut, Facebook), whereas other networks combine both categories (e.g. Ryze).

According to Howard (2008), there are five generic social network sites, namely:

- General social network sites, where the goal is to meet and socialise with friends, share content, schedules and interests (e.g. MySpace, Orkut, and Facebook).
- Social network sites of practice that target professionals and practitioners (e.g. JustPlainFolks, Plaxo, and LinkedIn).
- Social network sites of interest, that revolve around a common interest, such as games, sports, music, stock markets, politics, health, finance, and foreign affairs (e.g. the political discussion groups of e-democracy.org, and the stock market site of SocialPicks).
- Affinity social network sites that consist of a network of people based on a self-identified demographic or geographic category, such as women, African American, and Arab Americans (i.e. iVillage's 'Focussing on women').
- Sponsored social network sites that consist of communities and are created

by commercial, government, and non-profit organisations for a variety of goals. Examples of such sites are Nike and IBM (Kasavana *et al.*, 2010: 69).

Kaplan and Haenlein (2010: 60) on the other hand, identify a number of different types of social media that vary in terms of two dimensions. The first dimension is social manifestation that is embedded in a wide variety of media. It includes social network sites that rate low on social trends and media richness (i.e. primarily text-based and allowing for simple exchanges only); sites that have medium social trends and media richness with the ability to share media beyond simple text; and sites that score the highest in both social trends and media richness, which tend to replicate three-dimensional interaction, thereby providing the richest media experience. The second dimension consists of self-disclosure and social presence and varies on a continuum from sites where users are not required to reveal personal information at all, to media where participants provide more detailed profiles of themselves.

2.11.1 Collaborative projects

The first type of media identified by Kaplan's and Haenlein (2010) is a collaborative project, where the focus is on user-generated co-creation and the sharing of information. These sites are low on social presence, media richness and self-disclosure. A prime example of a collaborative project site that expresses the human desire to share and contribute knowledge is Wikipedia The magnitude of knowledge on Wikipedia is a remarkable collaborative effort (even if there are concerns about some of its entries). The success of Wikipedia demonstrates the power of collective content generation and the communal brain power. The nature of intranets is changing as the idea of shared knowledge combined with the ability to link, enable individual organisations to start wikis and link them with others. The dynamics behind starting a wiki not only focuses on the contributors debating what must be added or changed and the reasons behind it, but also on contributors evaluating each other's contributions, suggesting specific changes or asking for reviews (Anklam, 2009: 416).

2.11.2 Blogs

Blogs, the second type of social media, are categorised by low social presence and media richness, but are high on self-disclosure because they usually represent the personal views of one person. Blogging, which is short for personal weblog, consists of articles published by an individual on a regular or semi-regular basis and often forms the starting point for thinking and ultimately debating different issues. Blogs often provide links to other articles, blogs or books on a specific subject, while also offering potential social network connections as they represent people you might want to follow or get to know better (Anklam, 2009: 416).

2.11.3 Content communities

Content communities are the third type of social media and are characterised by low self-disclosure due to the virtual anonymity of users and contributors, but rely on social presence and media richness because of the diverse platforms that are available to share content, such as photos, videos, and PowerPoint presentations. Examples of content communities include YouTube, Flickr, SlideShare, and other media-sharing sites. These communities are not limited to the contribution of content such as the posting of videos, photos, and slides, but also invite conversation about the posted object. Any posting that is of interest to users is followed by long lists of comments that encourage additional groupings or group creation, re-purposing, re-using, and linking so that themes and ideas from videos or photos can be easily incorporated into other blogs, presentations, and wikis (Anklam, 2009: 416).

2.11.4 Social network sites

The fourth type of social media, are social network sites such as Facebook, the global leader of social network sites, that score high on self-disclosure, and only medium on social presence and media richness. Social network sites are based on the ability to make connections. Users create and share a personal profile with a group of friends, while diverse media platforms such as text, audio, photo, and video are available for the sharing of content. Two of the main features of social network sites, are the ability to manage and display connections to other people and the posting of status or activity updates. These postings of status or activities have

become very popular and are called micro- blogging that gave birth to the now very popular micro-blogging site called Twitter. The real-time updates on Twitter, with a maximum length of 140 characters, called ‘tweets’ represent activities, feelings, thoughts, questions and concerns of users. Twitter has been identified as an important corporate marketing and communications tool. Clients of companies can be informed and updated on a daily basis by a simple ‘tweet’.

2.11.5 Virtual game worlds

The fifth type of social network sites are virtual game worlds such as World of Warcraft, which rate low on self-disclosure but high on social presence and media richness. These three-dimensional environments allow users to create their own avatars that interact with one another. However, the rules of these games limit the degree of self-disclosure.

2.11.6 Virtual social worlds

Finally, there are virtual social worlds, such as SecondLife, where a user has all the virtual three-dimensional functionality of the game world, but with the added feature of having no restrictions about self-disclosure. The different virtual social worlds have different features and, therefore, different reasons for users to participate in them (Foster *et al.*, 2010: 4).

2.12 SUMMARY

This chapter highlighted the justification for the existence of organisations to efficiently and effectively satisfying unlimited human needs and wants with limited resources at their disposal. The management process of efficiently and effectively planning, organising, leading and controlling the activities in an organisation, to transform the factors of production into needs and wants satisfying goods and services, was discussed in detail. For the purposes of this study, tasks similar in nature in an organisation are grouped together in functional areas. Marketing, as one of these organisational functions, provides the central context for the current study. Marketing is defined as the process of identifying the needs and wants of consumers

and satisfying these needs and wants by means of mutual beneficial exchanges of needs and wants satisfying goods and services. Both management and marketing are influenced by the Internet revolution, and organisations need to adapt their organisational functions to integrate e-business into all aspects of the organisation in order to exploit the benefits of the Internet. An outcome of the Internet is the application of Web 2.0, which has resulted in the explosion of the use of online social networks. This topic is central to the current study.

As mentioned earlier, social networks have enormous marketing potential, both for businesses and the public. However, marketers need to make a mind shift when considering the use of social network sites. The vast marketing potential of social networking sites will be discussed in the following chapter.

Chapter 3

SOCIAL NETWORK SITES IN A MARKETING CONTEXT

3.1 INTRODUCTION

The earliest form of communication consisted of messengers delivering messages verbally, which was followed by handwritten letters. A technical breakthrough saw the advent of the telegraph, which made it possible for people to communicate over much longer distances and within a relatively short time. The telegraph was followed by the telephone, which enabled real-time communication and which became the major mode of communication for more than a century (Manasian, 2003: 1). Advances in telephone technology led to the creation of the fax machine, making it possible for people to send documents instantly all over the globe.

The next step in the communication evolution was the development of the Internet and e-mail, which provided a new mode for people to communicate. Cellular technology has overcome the restriction of wired telephony and made it possible for anyone to communicate wirelessly, anywhere on the planet. The new generation of smart cellular phones are sophisticated communication devices, which integrate different forms of communication, including telephony, faxing, Internet, e-mail, navigation and instant messaging.

Clemmitt (2006) concluded that people's social interaction have been impacted by technological progress and development. The most contemporary communication development, namely social networking, attests to the new forms of social interaction, with people sharing their lives by twittering or posting on social network walls (New Media Consortium, 2007).

Online social networking has evolved from being used by a few to being adopted by the masses. Social networking is no longer an activity that are performed by users in their spare time, but forms an integral part of the daily life of many people (McMillan & Morrison, 2006: 73).

Hoffman and Novak (1994: 50) found that the youth especially are replacing the television as source of entertainment with the Internet, while the Internet is also the preferred source for satisfying their communication and educational needs. The authors conclude that young people have become so reliant on the Internet that the authors believe the youth cannot function without it. The huge user base of social network users combined with the large amount of user- generated content have led to the explosive growth of social networks and have given rise to a new means of communication (De Souza & Dick, 2008: 144).

Social networks give both adolescents and adults the ability to create their own online identities. Adolescents and young adults use social network sites most frequently; in fact, many claim their total dependence on the Internet for many daily activities (Nyland, Marvez & Beck, 2007: 23), and the Internet has thus become an essential part of the cultural life of many teenagers (Boyd & Jenkins, 2006).

Social networks currently have billions of users and attract more than 90% of all teenagers and young adults in the United States. The cover of *Business-Week magazine's* issue dated December 12, 2005, pointed out that "the next generation of Americans could be called the MySpace generation" (Trusov, Bodapati & Bucklin, 2010: 643).

In order to understand the relevance of the social network construct as the central topic of this study, a number of different operationalisations of the concept must be considered.

3.1.1 Social network sites versus social networking sites

A distinction is drawn in the literature between the concepts 'social networking sites' and 'social network sites' when referring to sites such as Facebook, MySpace and Flickr, even though these two terms are often used interchangeably. Boyd and Ellison (2008: 211) suggest that the purpose of networking is to start a relationship, often with a stranger (Haythornthwaite, 2005: 140). On many of the large social network sites, participants are not necessarily networking or expecting to meet new people. Instead, they are primarily communicating with people who are already part of their extended social network. There is a clear difference between online and offline friends, with offline friendships involving more emotional and practical support

and trust, whereas online relationships only require, at minimum, a public performance of the relationship. Therefore, for reasons of emphasis and scope, Boyd and Ellison (2008: 211) prefer to use the term ‘social network sites‘.

Beer (2008: 517) argues, however, that the term ‘social networking’ is to be preferred as it encompasses potential connections between strangers as well as the connections between people who have an existing relationship in real life. It clearly demarcates social network sites as sites for networking and connecting with people.

The argument of (Boyd & Ellison, 2008: 211) is deemed more appropriate and, therefore, the narrower definition namely ’social network site or social network sites’ (SNS/SNSs) will be used in this study.

3.1.2 Definition of social network sites

The most cited description of the term ‘social network’ is the one by Boyd and Ellison (2008: 211), which posits that social network sites provide the following functionality:

1. creating a public or semi-public profile within the constraints of the particular social network site;
2. generating a list of other users with whom they are connected; and
3. viewing and navigating this list of connections as well as those made by others within the particular social network site.

Boyd and Ellison (2008: 211)

Henderson and Bowley (2010: 237) focus on the collaborative aspect of a social network, as it allows its users to participate, connect, create content, share information and work together as a team (thus forming an online community). Examples of these collective networks are: wikis, blogs, podcasts, vidcasts (or vlogs), mashups, folksonomies and online virtual worlds.

Social network sites are described by Acquisti andGross (2006: 37) as online communities where the profile of a particular individual allows him/her to network with others and where a profile provides a representation of him/herself.

Dwyer, Hiltz and Widmeyer (2008: 292) focus on the communicative aspect of social network sites, seeing that social networks assimilate digital communication,

disseminate information, allow a user to create his/her own digital identity and provide a single point of access to communication tools, which transcends time and space. It is thus clear that social network sites allow the user to connect with others, network with others and receive and send information to others.

3.1.2.1 Creating a social network profile

The first essential element of social network sites is to create an online profile. One can re-create oneself by means of the act of typing (Sundén, 2003: 3) in a social network context, by creating a social network profile, which forms part of the registration process on most social network sites. This profile normally entails the completion of prompted form fields, with only a minimal number of fields that are compulsory. Most of these form fields request optional information, which provides a more detailed user profile, but are not compulsory and can be "skipped" or ignored. The user is thus able to control how much or how little information is to be made public.

The most common types of detail that can be provided for a social network profile include *inter alia* the following:

- profile picture;
- name;
- age;
- date of birth;
- gender;
- home town;
- location;
- religion;
- relationship status;
- e-mail address;
- address;
- favourite movies/tastes/books/music/television;
- personal interests and activities;
- contact information;
- education and job;

- philosophy;
- political views; and
- hobbies.

Most social network sites also encourage users to upload a profile photo. Additional interactive functionality provided by social network sites include:

- sharing photos/videos;
- uploading/downloading music;
- creating a personal blog;
- status updates;
- connecting with various groups;
- games;
- birthday reminders;
- event reminders;
- quizzes; and
- adding comments or private messaging of other users.

Messaging can take the form of either public messages, private messages or instant messages (chat) news feeds, events, applications, games and status updates. (Boyd & Ellison, 2008: 210; Taraszow, Aristodemou, Shitta, Laouris & Arsoy, 2010: 88).

Internet Usage Statistics for all the Americas (2012: 2) describes social network sites as “the latest generation of mediated publics”, which allows users to gather in a common virtual environment. The author points out that features such as persistence (i.e. the permanence of a profile and its circulation in cyberspace), searchability, replicability, and invisible audiences constitute the key elements of this environment. Users’ behaviour may be mediated by these features without necessarily integrating the underlying immediate and future consequences or risks embedded in these technologies or their actions.

3.1.2.2 The social network profile and user identity

Walther and Parks (2002: 529) conclude that previous studies about the forming of impressions online have shown that people can and do form impressions of others by means of a number of computer-mediated communication (CMC) encounters. In

addition, Walther (1992: 54) suggests that the social information processing theory can be used to analyse impression formation in a computer-mediated communication medium. The social information processing theory postulates that whereas people in a real-life context rely on non-verbal signals to form impressions of people, this is not true in a CMC environment. In an online environment, people use whatever information is available to form impressions, despite the lack of non-verbal signals. The social information processing theory has been used to analyse a variety of information types in computer-mediated communication media, including language style and content and photographic or biographic information (Tanis, 2003: 17). The social information processing theory is well suited to analyse both new cues and social network impression formation.

Some of the cues that are used on social networking sites are posted information about the self, including a photograph (almost always showing the self), that occupy a dominant space on the profile; textual self-descriptions; other social network members (friends); messages left by friends on a user's profile; and lastly, the information left on a user's profile specifying the status of the user, which include aspects such as where the user currently is and who he/she is with (Walther, Van Der Heide, Kim, Westerman & Tong, 2008: 28).

Walther *et al.* (2008: 37) further found that a profile owner's social standing and ranking are determined by how he/she is rated by his/her online friends (via their comments). Posts on the profile owner's wall referring to his/her sociable behaviour increased his/her positive ranking. However, postings alluding to improper romantic attachments negatively affect the profile owner's social standing. The adage of judging a book by its cover has also proved to be true in this context, as the more physically attractive the friends of the profile owner are, the more physically attractive the profile owner him/herself is deemed to be. Observers form their impressions not by overt identity claims made by the profile owner, but rather by the social evidence or residue left by the profile owner's friends.

As users are responsible for providing information that makes up their user profile, this construction of a user profile means that the user profile, per definition, has to be subjective in nature and can, therefore, never be real. The process of creating a user profile is called 'impression management', which is essential in creating the desired

identity that the user wishes to portray in the social network world (Pearson, 2010: 118).

Most social network sites encourage their users to be as truthful as possible when creating their user profile, and introduced measures such as verification by means of e-mail and cell phones. Most social networks also require a real picture of the user as part of the profile, rather than some abstraction. The authenticity of the pictures, however, is impossible to verify and, therefore, misrepresentation is widespread. It is commonplace for users to use photographs in a particular setting that portray how the user wants to be perceived in the social network world.

Toma, Hancock and Ellison (2008: 1024) found that when analysing online profiles on Match.com, Yahoo!, Personals, Webdate and American Singles, 81% of a survey group provided information that strayed from reality. Discrepancies were often present, yet were generally small in magnitude. Height was the information men lied about most often whereas women lied most often about their weight. The farther from the mean, the more participants lied. Participants proved to be least truthful about their photographs and most truthful about their relationship status.

Alexander (2007) adds that social network users adhere to the Shakespearian view of “All the world's a stage, and all the men and women merely players”. Facebook empowers users to continuously change their public profile, with every user wanting to appear more attractive and more interesting to those viewing his/her profile. Facebook users, for instance, can engineer exactly what they want their profile to be. The subjective representation tendencies by users are confirmed by Williams (2008: 34) who claims that social network users construct their pages with considerable thought and contemplation. In other words social network pages convey, not the reality of individuals’ lives, but rather the ideal that they aspire to and how they want to be seen by others (Casteleyn, Mottart and Rutten (2009: 440).

As a result, social network sites are enabling new forms of so-called ‘narcissism’ by means of constructing one’s offline profile online and inviting others to start friendships by means of such representations of the self (Ibrahim, 2008: 249). The social network user profile can be likened to Renaissance portrait paintings, where individuals are painted the way they would like to be perceived, rather than the way they really look. Consistent with this subjective representation, Rosen (2007: 15)

equates individuals' social network site profiles to painting a self-portrait – the public display of personal information is an essential part of a social network site profile. Falsification and dishonesty often go hand and hand with individuals' online self-profiles.

A distinction can, however, be drawn between impression management and Fakesters. Impression management is the presentation of a real person in a specific way, whereas Fakesters are fictional profiles of characters, celebrities, objects, icons, institutions, and ideas. Thus, fake profiles (for example of the television character Homer Simpson) feature alongside profiles of real people and real institutions, for example, Brown University (Haythornthwaite, 2005:140).

In response to user expressed, needs and wants, the policies and protocols of social network sites are continuously changing. Initially, Fakesters were not allowed, but eventually any profile was accepted, which made it easy for Fakesters to be anyone they wished to be. There is however, currently a movement towards some form of verification before users can register.

3.1.2.3 Populating the social network

The next step after creating a social network profile is to populate the social network with members or "friends". This process requires a customised system of selecting contacts to follow or add to a particular social network. For some social networks this choice simply entails selecting members, whereas with others, permission has to be granted first by those members before the latter could be included in the social network.

The social network sites where permission is required from the user before his or her profile information can be viewed, provide for varying levels of privacy, ranging from a public profile, where all user information is publicly available to everyone, to a semi-private profile (Lange, 2008: 364), where user information is only available to those who have been authorised to view a profile by means of the 'friending system'. The default settings for most social network sites make provision for access to basic information, but not to all the information provided on a user's profile. This access to personal information enables third parties, ranging from hackers to state departments, to gain access to a user's profile without being granted access by

social network sites. This voluntary providing of personal information by users could potentially expose them to identity theft, stalking (online and physical) as well as blackmail (Gross & Acquisti, 2005: 73).

The social networks that require authorisation for profiles to be viewed follow a process of ‘friending’. In order for a member to gain access to all profile information of another member, a ‘friend’ request is first sent to the member. If the request is accepted, both members are listed in the ‘friends’ list’ of each other. Boyd and Ellison (2008: 213) call this a "bidirectional confirmation for friendship". As soon as a friend has been confirmed or authorised, the system reveals the personal profiles of both parties, as well as their links to other members of the social network. These friendship links allow users to move from one profile to another (Boyd, 2006). This movement among profiles often has a snowball effect, with friends befriending overlapping friendship networks (Tong, Van Der Heide, Langwell & Walther, 2008: 532). Beyond this general description, the details of how friendship works are site-specific (Haythornthwaite, 2005:140). Bi-directional confirmation is not required by all social network sites. Some sites, such as Twitter, are one-directional and users are then often referred to as ‘fans’ or ‘followers’.

Social network sites provide the required computer mediated infrastructure which makes it possible for users to create their own private networks (sometimes referred to as a community) within a larger network. Visibility and access are two key elements that distinguish social network sites from each other (Boyd & Ellison, 2008: 213).

One of the most popular means of communication on social network sites involves the leaving of public messages, uploading of pictures, videos, and the like “on a kind of blackboard”. On Facebook, the public message board is called ‘The Wall’. All messages published on the wall are visible to everyone who has access to a user’s profile (Taraszow *et al.*, 2010: 83). The wall has the effect of keeping users up-to-date with the activities of all friends.

3.1.2.4 Online communities

One of the predictable consequences of social network activity is the formation of online communities. According to Karakas (2009: 26), a defining feature of social

networks is the formation of global online communities where users with similar interests can interact online regardless of their geographical location or social standing. These online communities allow users to chat, argue, have academic discussions, shop, plan, and gossip, with social interactions being performed by typing words that appear on a computer screen (Rheingold, 2000: 4).

3.1.2.5 User-generated content

User-generated content refers to publically accessible, online information, that is generated by private individuals rather than professional organisations (Vickery, Wunsch-Vincent, 2007: 18). User-generated content often focuses on new technology (e.g. podcasting, digital video and cell phone photography) that functions as media that can be accessed by the public (Blackshaw, 2007).

Exchange, sharing and connectivity are essential components of the social network culture and of the social network architecture (Nardi, 2005: 98). As mentioned previously, social network sites provide the computer mediated infrastructure and interface in order for members to construct their own individualised networks. By means of the sharing of photos, videos and music and publishing via personal blogs, status updates, comments and messaging, users are able to generate a considerable amount of content.

The collaborative nature of user-generated content makes it possible that an enormous amount of information can be provided within a relatively short period of time. A good example of the enormous power of online collaboration is Wikipedia which, strictly speaking, is not a social network site. Wikipedia illustrates the potential of online collaboration to create a considerable amount of content very quickly. Another example of a site with a large amount of user-generated content is YouTube, where video clips can be found on virtually any topic.

User-generated content originated as bulletin board entries on portal sites such as Yahoo in the early 1990s. Since then, user-generated content has gradually developed into collaborative collections of information (such as blogs, wikis, picture-sharing, video-sharing, social networking and Wikipedia) as well as personal sites (such as MySpace and YouTube) and a combination of these two (such as Flickr) (Lanchester, 2007).

Producing large volumes of user-generated content is an important social network characteristic, as it is this content which is one of the main attractions for users to join social network sites. The content thus needs to be clearly understood if social network sites are to be effectively used for marketing purposes. Any form of marketing masquerading as user-generated content will be immediately identified as a form of self-propelled advertising media (SPAM) with the associated negative sentiments towards the provider thereof (Shao, 2009: 13).

3.2 THE CONCEPT OF 'FRIEND' IN A SOCIAL NETWORK CONTEXT

Haythornthwaite (2005:140) describes a friend as a relationship between individuals based on a form of common affection or respect, and generally involves a degree of trust between the individuals. Friendship is also defined in terms of the strength of the ties with others, as well as the degree of willingness to support others (Fischer, 1982: 64). These characteristics of friendship are sensitive to a given cultural context with the result that the concept of friendship can change as the cultural context changes (Degenne & Forsé, 1999: 6). One such contextual framework, that could influence the perceived concept of friendship, is social networks.

3.2.1 The meaning of friendship in a social network context

The meaning of the concept of 'friend' in a social network context differs from the concept of a friend in real-life society (Tong *et al.*, 2008 537). The links in online social networks are not as strong as those in traditional networks, since people tend to befriend anyone they know in their social network, unless they specifically dislike them (Boyd, 2004: 26). A survey by Vanden Boogart (2006: 43) revealed that approximately 46% of survey respondents had either neutral feelings or felt disconnected from their 'friends' on Facebook. Furthermore, it was found that it is common for Facebook users to befriend other users of Facebook who they hardly know in real life; this process is linked to the social inaptness of refusing a friend request from an acquaintance (Boyd, 2007a). From these findings on befriending, it is reasonable to conclude that many social network users have a wide array of relationship types - all categorised as 'friends' - and that the number of 'friends'

online (e.g. on Facebook) often can be more than in real-life social networks. This increase in the number of social network friends could be attributed to online friendships being more artificial, as the technology makes it very easy to establish contact online and it is socially inappropriate to refuse an online 'friend' request (Tong, Van Der Heide, Langwell & Walther, 2008: 538).

3.2.2 The reasons for friendship on social networks

Lampe, Ellison and Steinfield (2006: 167) propose that there are two main reasons for Facebook use, namely 'social searching' and 'social browsing'. Social searching focuses on information gathering about contacts in real-life society, whereas social browsing focuses on using Facebook to network with other users, with the intent to interact socially in real life in the future. The authors found that Facebook was used mainly for social searching purposes in order to collect information on individuals with whom they have had real-life contact (e.g. class mates). Social browsing on Facebook proved not to be popular at all. Facebook is used mainly to keep contact with an old friend or school mate. This confirms the social searching aspect of Facebook, but it also suggests that it is the major social function of Facebook.

Haythornthwaite (2005:141) cite the following most common reasons for 'friendship' on the social network Friendster:

- establishing contact with friends, acquaintances, family members and colleagues;
- it is socially frowned upon when refusing a friend request from a familiar person;
- users have a higher popularity rating if they have many friends;
- it affirms the user support of that person, music band or product;
- a list of friends often tell other people who the user is;
- being friends with someone popular makes the user appear popular as well;
- the more friends users have, the more people's Friendster activities users can access (e.g. their bulletins);
- it is the way to see someone's private profile;
- the more friends users have, the more people they can see (e.g. with Friendster); and

- users want other users to see their Friendster profile and those activities and friends' lists can help users to find a person.

One can conclude that the term 'friend' as used on social network sites does not have the same meaning than in real life. In real life a friend is seen as someone that another person has a meaningful relationship with. On social network sites, on the other hand, friendship or so-called 'friending' happens on a very superficial level; often the user will befriend someone simply to boost his or her own popularity and social standing.

It is evident that the Internet is not used only to share and collect information anymore; the networking aspect where the users interact with each other online and create virtual communities will be discussed next.

3.3 WEB 2.0 AS BASIS AND CATALYST FOR SOCIAL NETWORK USE

The Internet has changed from a means of collecting and sharing information, to a way to link and empower people (Kirkwood (2010: 118). Gunawardena, Hermans, Sanchez, Richmond, Bohley and Tuttle (2009: 3) contend that the progression of the World Wide Web from Web 1.0 to Web 2.0 changed the way we collect information as well as the way we interact and learn from each other. Technological changes lead to human behavioural changes and changes in the way we obtain knowledge. The implementation of Web 2.0 is an important historical event as it paved the way for a participating change in our culture, while it also signified the birth of social interaction that is truly participative and collaborative. This kind of social interaction is called 'Wikinomics'.

Limpens, Gandon and Buffa (2008 13) define Web 2.0 as a progression in the social construction and use of the Internet, while Kamel Boulos and Wheeler (2007 2), refer to it as the 'Social Web' because unlike Web 1.0, its content is generated more easily by the user while its ease of publishing and collaboration improve the independent use of it.

The change in social interaction facilitated by Web 2.0, together with the platforms provided by social networks for users to interact and contribute content, are responsible, to a large extent, for the explosion in social network use.

3.3.1 Definition of Web 2.0

Henderson and Bowley (2010: 237) describe social media or Web 2.0 as an assortment of new Internet applications that focus on collaboration, connectivity, user-generated information and the sharing of information. Internet services focus on interaction and collaboration between organisations and people as opposed to Web 1.0's focus on the collecting and gathering of information in isolation.

The Web 2.0 is described by Karakas (2009: 23) as "an interactive, hyper-connected, immersive, virtual, digital online ecosystem or mega-platform where users create and share knowledge (e.g. Wikipedia, Delicious), innovate and collaborate together (e.g. InnoCentive), have fun and entertainment (e.g. Zango, Second Life), interact, network or connect with each other (e.g. LinkedIn, Facebook, Skype, or Twitter), design new products or buy and sell merchandise (e.g. Ebay, Craigslist, or Amazon), connect and communicate globally with mobile devices (e.g. iPhone, Blackberry), write reflection blogs (e.g. Blogger), share their photos (e.g. Flickr), podcast their presentations or make creative films (e.g. YouTube), develop projects (e.g. wikis or Google docs), and express themselves to the world."

The original web applications and web browsers were static in nature and displayed information without allowing much feedback (Beer & Burrows, 2007: 17). The applications were text-based with limited functionality, which allowed very little opportunity for businesses to communicate interactively with their target markets.

Later the emphasis shifted towards online collaboration (Constantinides & Fountain, 2008: 231), which changed the focus from seeking and gathering information to collaborating and sharing (Tapscott & Williams, 2008: 2). Web 2.0 is providing new opportunities to interact (Henderson & Bowley, 2010: 237), share brain power and collaboratively interact with others (Levy, 2009: 122).

Web 1.0 featured content that was given and filtered by the very organisations providing it, and applications were created by so-called technical experts, which was

difficult for users to understand and use. Web 2.0, on the other hand, created an open construction that eliminated the complexities of Web1.0 of linking and communicating with other users (Weinberger, 2007). The simplifying of Web sharing technologies have directly resulted in an increase in user-generated content (Beer & Burrows, 2007; Tapscott & Williams, 2008: 2).

The exponential increase in user-generated content that Web 2.0 facilitated, has caused a major shift in power from the traditional providers of content to a collaborative and "open and collectively spirited community" of general online social media users (Ager, 2011: 83)

3.3.2 The components of Web 2.0

According to Karakas (2009: 24), the Web 2.0 ecosystem can be described by the following five C's: creativity, connectivity, collaboration, convergence, and community. These five C's represent the paradigm shifts and changes that occurred with the progress to Web 2.0.

3.3.2.1 Creativity

The increasing importance of creativity and innovativeness on digital platforms, as well as on future business platforms, represents the first paradigm shift towards Web 2.0. Entirely new ways of thinking and doing are changing business, culture and perception (Postrel, 2003: 1). Some examples of how organisations are trying to introduce creativity and innovativeness, are by creating contacts by organisations that network, using group intelligence, and generating co-operative intelligence in inter-disciplinary teams at the workplace (Karakas, 2009: 24). A peer-driven process of ‘collective creativity’ or ‘group genius’ was used by Pixar to accomplish a technological break-through in computer animation (Catmull, 2008: 64). Merritt and Lavelle (2005: 80) predict that future business schools might actually become design schools.

3.3.2.2 Connectivity

The second paradigm shift is connectivity. Connectivity, described as the ability to link or connect with the Internet, also refers to the technological infrastructure that

links remote computer systems with global network connections. The telecommunications industry has seen tremendous innovations in recent years that have contributed enormously to increased connectivity (Crenshaw & Robison, 2006 190).

Two of the major contributors to connectivity are the huge increase in transmission rates and the advancement in wireless technologies. The higher the transmission rates of data, the higher the perceived usefulness and value to users, while wireless communications make it possible to connect with various devices from almost anywhere on the globe. The wireless, improved data transmission improve the lives and efficiency of users by providing ultra-speed wireless Internet access, wireless phones, downloadable application and short messaging services (Rao, 2001: 56).

The distinctions between learning, work, fun, and leisure are no longer perfectly clear in the virtual world. There is a movement towards a fully connected society with an 'always on' culture, in a global world where people see themselves as global citizens, who actively participate in virtual technology and knowledge sharing (Karakas, 2009: 25). The so-called 'digital natives' or 'Generation Y' users (i.e. users who grew up with the Internet and social networks) are characterised by having high levels of digital literacy, being frequent users of online social networks, and by having multitask capabilities. They also regularly engage in socialising and learning on the Internet, and consume and produce digital information.

3.3.2.3 Collaboration

Collaboration is the third paradigm shift and can be referred to as 'Wikinomics' (Tapscott & Williams, 2008 2). Wikinomics can be described as the new skill and discipline of collaboration where billions of Internet users collectively participate in the advancement of society, in order to create prosperity and work together towards social growth on the world stage that is known as the Internet. Tapscott and Williams (2008: 2) further claim that the nature of sharing is changing, which in turn, is changing the way people invent, produce and market goods and services globally. This change in human behaviour, to a large extent, is brought about by new types of mass collaboration. Tapscott and Williams (2008: 8) propose four key principles of mass collaboration: openness, peering, sharing, and acting globally.

An example of recognition of the collaboration revolution was the cover story of *Time Magazine* in 2006, which focused on the mass collaboration on the web and the way in which small contributions of millions of people on the web have led to digital democracy and civic activism. Consequently, *Time Magazine* named the person of the year as 'You' (Grossman, 2006).

3.3.2.4 Convergence

The fourth paradigm shift is called convergence, which is the principle that the various new technologies of information and communication (i.e. radio, television, newspapers, CD players, video recorders, telephones, mobile devices, and the Internet) and global connectivity (i.e. cable networks, satellite systems, televisions, computer terminals and mobile devices) are all coming together to form one global information channel. It is estimated that more than one billion people are connected to the Internet, which is referred to as the global village, with no physical or temporal boundaries.

Convergence enables computers, telecommunication devices and networks to work together locally, regionally and globally, to share and exchange content or information.

Tan and Teo (2002: 27) believe that the connecting of people, ideas, resources, and markets by means of the Internet is becoming the most powerful driving force of globalisation, democratisation, and social innovation.

3.3.2.5 Community

The final paradigm shift is the use of computer-mediated platforms and other media for social interaction and community formation. This new media is called 'social media', and is used to teach, organise, promote, communicate, protest, raise money, make information available to everyone, and increase the collective consciousness (Karakas, 2009: 26). Social media often leads to the formation of global 'online communities' or 'virtual communities' where like-minded users come together in cyberspace, which transcend geographical and social boundaries.

These five paradigm shifts reflect some of the mind-set changes, innovations and value creations that organisations will have to adapt to if they wanted to survive and

thrive in the complex, competitive and dynamic Web 2.0 environment. One such value creation that organisations will have to adopt as part of the branding and positioning online is the creation of social capital between organisations and their consumers.

3.4 THE CONCEPT OF SOCIAL CAPITAL IN SOCIAL NETWORKS

Leiner, Hohlfeld and Quiring (2009: 1) postulate that capital is a means by which goals can be reached, for example to buy products or to invest money. Capital in a social network context, however, is not limited to economic capital, as economic capital only describes a limited part of the process of realising goals. Other forms of capital, such as cultural capital (e.g. social relationships) and symbolic capital (e.g. prestige or symbols of status) also play an important role. Leiner *et al.* (2009: 1) suggest that understanding social capital is essential when attempting to realise how the Internet has changed during recent years, because relationships between people are central to Web 2.0 and social networks.

3.4.1 Definition of social capital

Leiner *et al*. (2009: 1) divide capital into four basic types. Economic capital includes money (investment), goods, and any other form of economic value. Cultural capital consists of education, which is divided into work, life, education and cultural education. Work, life and education include everything that appears in curriculum vitae - from school and university, to internships and jobs. Cultural education refers to knowledge about art and mass culture, like books and movies. Symbolic capital includes prestige, symbols of status, privileges, and institutional functions. The last type of capital, also referred to as social capital, refers to how people and social networks are linked and how the standards of mutual benefits and dependability develop from that (Aubrey *et al.*, 2008: 1).

Social capital has also been referred to as the “invisible glue that brings and holds communities together”. The concept of social capital consists of elements such as: social trust, goodwill, mutual support, shared language, shared norms, and a sense

of mutual obligation from which people derive value (Chi *et al.*, 2009: 214). Social capital is the foundation of a community and defines how people interact with each other, how shared contexts emerge, and how on-going discourse influences their communication and interpretation processes in this community (Huysman & Wulf, 2005: 87), be it a knowledge creation community, a health care community, or any other community (Preece, 2002: 37).

3.4.2 The elements of social capital

According to Onyx and Bullen (2000: 24), the concept of social capital comprises five themes. Firstly, social capital exists in networks, consisting of cross-links between individuals and groups that can vary from weak to strong. The second theme is the mutual benefit that social capital is based on, because goodwill is expected to be returned. The third theme is trust, which includes a level of confidence that others will not engage in exploitative behaviour. The fourth theme is that social capital is based on 'susceptibility to norm influence', where members of the community subscribe to the generally accepted rules of behaviour of the group. The final theme is personal and collective efficacy, which refers to the willingness of group members to actively participate in group activities. Onyx and Bullen (2000: 26) conclude that these dimensions of social capital occur in different levels of intensity in different communities.

3.4.3 The effect of social network use on social capital

The more time spent online, the less time there is available for real world social interaction (Kraut, Patterson, Lundmark, Kiesler, Mukophadhyay & Scherlis, 1998: 54). This subsequent reduction in real-world interaction eventually leads to a decrease in social capital. If, however, the time that is spent online is spent on social networks, it leads to an increase in social capital.

Social capital originates from the interactions within personal networks , according to the following authors (Blanchard & Horan, 1998; Lin, 2002; Leonardi, Nanetti & Putnam, 1993; Haythornthwaite, 2002; Levi, 1996) and, therefore, social networks do form part of personal networks and contribute to social capital formation.

Steinfield, Ellison and Lampe (2008: 435) draw a distinction between users' intensity of association and distinguish between bonding and bridging forms of social capital, (which is directly related to Granovetter's (1983) distinctions between strong and weak ties). Bonding social capital is the strong ties that develop between relatively homogeneous, exclusive groups of people. Bonding social capital usually involves family or close friends who provide emotional and other substantive support. Bridging social capital, on the other hand, is related to weak interpersonal ties and refers to the ties between people such as members of a sports club, work colleagues, and society members. The most common use of bridging social capital is to provide useful information, but it does not extend to emotional support (Steinfield *et al.*, 2008: 435).

Ellison *et al*. (2007: 1155) found that Facebook participation is related to the ability to form and maintain social capital and is primarily used for "maintaining existing offline relationships or solidifying off-line connections", rather than to meet new people. It emerged that individuals searching for friends on a social network site did so based on a common, shared, offline element. A study by Lenhart and Madden (2007: 203) concluded that the reason why 91% of US teenagers at that time used social network sites was to connect with friends.

In terms of bonding social capital, respondents reported that they used Facebook as a way of maintaining and strengthening both past relationships and ties that already exist. Facebook also generates bridging social capital in that it is useful to expand an individual's network by increasing the number of weak ties. Foster *et al.* (2010: 8) found that Facebook has more impact on bridging social capital (46% of the variance) than on bonding social capital (22% of the variance).

3.5 SOCIAL NETWORKS AND MARKETING

Internet retailing, also known as e-commerce, started in 1994 with the launch of Amazon.com from a garage, but it took more than a decade for major retailers to realise the value of online retailing (Branston (2009: 34) . The subsequent growth of Internet retailing is illustrated by a recent study that found that before completing a transaction online, 71% of US shoppers look at several online stores and 42% of

shoppers make use of the price comparison facilities online before making a purchase (MarketingCharts, 2007). This shift in buying behaviour is manifested in a recent Ipsos-Reid survey, which indicates that 81% of marketers intend to increase their online advertising budgets despite the economic downturn (Foster *et al.*, 2010: 3). This increase in online budgets appears to be occurring at the expense of print advertising budgets (a decrease of 41%), radio (a decrease of 26%) and television (a decrease of 22%). These figures illustrate that e-commerce has developed from a misunderstood competitor to an integral part of most organisations' marketing mix. E-commerce affects not only the buying of goods, but also the service industry.

Travel agencies are directly experiencing the effect of e-commerce, with consumers taking over the whole process of booking, checking in, choosing their aeroplane seat and printing their boarding pass without any help of an agent (Constantinides, 2008: 216).

Another emerging aspect from e-commerce is the use of social network sites such as Facebook as a marketing platform. In light of the recent global recession, any and all possible competitive advantages are to be explored in order to achieve increased levels of workplace productivity and employee satisfaction (Levin, Foster, West, Nicholson, Hernandez & Cukier, 2008: 67). One possible method of realising these increased efficiencies is by means of social networking (Bennett, Owers, Pitt & Tucker, 2010: 138). Social network sites such as Facebook, are an emerging promotion and communication channel for marketers and therefore the strategies for leveraging the technology continue to evolve and develop (Foster *et al.*, 2010: 16). Marketers, however, need to consider how consumers will react to their online marketing strategies – online feedback can make or break a marketing strategy.

An important aspect that emerges from social network sites is the concept of collective customer reaction, which is growing rapidly among users worldwide. Collective customer reaction results from the expression of online users' attitudes towards a wide variety of topics (Constantinides, 2008: 216). This feedback is generated to a large extent in a spontaneous manner by individuals and is free from influence by environmental or ethical pressure groups.

These collective customer reactions, often in the form of product and service reviews, represent the collective psyche of a particular community, which can be invaluable for marketers to understand user needs.

3.5.1 Electronic word-of-mouth

The collective customer reactions alluded to are also sometimes referred to as electronic word-of-mouth (eWOM) and consist of communication by means of electronic media, such as online discussion forums, electronic bulletin board systems, newsgroups, blogs, review sites, and social networking sites (Goldsmith, 2006: 408). Electronic word-of-mouth communication by means of electronic media facilitates the gathering of information on a wide variety of topics from a wide variety of geographically dispersed community members. A recent survey found that most customers trust online opinions more than they trust marketing communication (Nielsen, 2013) and, therefore, these online opinions could have an impact on the consumer decision-making process (Cheung, Lee & Rabjohn, 2008: 230).

Social network platforms have the effect of amplifying the eWOM 's reach by connecting a considerable number of communities electronically (Goldenberg, Libai & Muller, 2001: 212). In this way, information is distributed across many communities very quickly, resulting in the so-called ‘viral’ distribution of information. ‘Viral’ in this context refers to the exponentially rapid spread of information on social networks. An example of a viral distribution of information is the video clip of the singer Susan Boyle who appeared on X-Factor, a talent search competition on UK television. YouTube registered more than 100 million viewings worldwide in the week following her appearance on the television show (Branston, 2009: 34). Viral spreading can reach and mobilise large numbers of consumers quickly, which can be so large in fact, that it draws the attention of the traditional mass media and usually gains such a momentum that it is no longer possible for anyone to stop the distribution of the information, including the originator.

Trusov *et al*. (2010) found that eWOM is more effective and has a larger and longer effect on consumers compared to traditional marketing, but it is also a means of communication that organisations can use to their advantage to increase the persuasiveness of marketing messages. Furthermore, eWOM has the potential for

successful social networking campaigns, if the unique nature of social networks is acknowledged and leveraged in the design of social marketing messages (Mabry & Porter, 2010: 13).

3.5.2 The nature of social network communication

The marketer controls the spreading of information in traditional media, whereas in social media, marketers must attract consumers and encourage them to use and generate information (Foster *et al.*, 2010: 16). The role of the marketer in this relatively new indication medium is to facilitate conversation without in any way trying to control the content. Technology has created new opportunities for marketers to develop promotional strategies that are more of a conversation with customers than a one-way communication (Jaffe, 2007: 38). In this regard, Levin *et al*. (2008) suggests that marketers should be careful if they wanted to access consumer data via social network sites. Although it is not against the law to access information available on social network sites to advertise a product or service, extracting information about the user may result in the user feeling that his/her privacy has been violated. This means that marketers need to be knowledgeable and sensitive to the views and apprehensions of social network site users. In other words, businesses should create online communities as opposed to traditional advertising messages Rowley (2001: 204) .

Social networking sites are clearly revolutionising advertising: firstly, it is affecting traditional advertising media budgets and, secondly, it is changing the way consumers are exposed to advertisements. Facebook CEO, Mark Zuckerberg, introduced what he called a “social ad” in November 2007, designed to assist advertisers in planning the best advertisement campaigns ever (Klaassen, 2007). Zuckerberg then declared that “the next hundred years will be different for advertising, and it starts today.” The programme that was designed to introduce these social advertisements was called Beacon, which tracked Facebook users’ purchases and displayed them to their friends. For example, one of the Beacon affiliates, Blockbuster, would send information regarding movies rented automatically to everyone in the users’ network. The users of Blockbuster could then create their own content by entering reviews afterwards, thereby recommending the movie or not.

The problem with the Beacon programme was that users were enrolled in the programme automatically without their consent. Collective consumer action ensued in the form of online petitions, which resulted in extensive negative publicity and a large reduction in the scope of the Beacon programme (Urstadt, 2008: 40). This example serves both as an illustration of new, innovative ways of communicating in social networks, but also of how careful marketers should be in their approach to using this new medium.

Social network advertising is generally regarded as highly targeted and relevant as the information comes from a friend that can be trusted to provide an honest opinion, rather than being exposed to a 'paid for' marketing message (Gangadharbatla, 2008: 6). In a study by Foster *et al.* (2010: 16), it was reported that social network users participate in social networks to satisfy different motivational needs, and that advertisers should appeal to the diverse reasons for involvement by using multi-dimensional presentations. These presentations should portray a balance between giving information and establishing a sense of community.

Consistent with the concept of a multi-layered approach, Li (2007: 4) coined the term 'social technographics' to describe the different ways in which consumers may behave online, which in turn, governs how they respond to approaches from companies via social networking channels. For example, a person defined as a 'critic' is likely to comment on blog postings whereas a 'spectator' is not, and someone categorised as 'inactive' is unlikely to respond to any type of new media communication. It is thus clear that organisations have to contemplate how different social network segments respond to different communication approaches when developing their marketing mix (Harris & Rae, 2010: 10).

3.5.3 Social network revenue generation

Social network sites derive their revenue from two basic operating business models. The first model requires the user to pay a subscription fee in order to be a member of the social network site (e.g. LinkedIn). The second model uses advertising to generate revenue and users are not required to pay any fees to be a member of the social network site.

There is a general resistance by users to pay any form of fee to belong to a social network, especially since there are so many alternatives available. Therefore, most of the large social network sites are free to use. There does seem to be a tacit agreement by users to endure a certain level of marketing communication in exchange for the free use of the site. Advertising thus remains the primary source of revenue for most social network sites.

One of the most attractive features and potential sources of revenue for social network sites is the ability to collect extensive behavioural data, which is beyond the scope and ability of any marketing research effort. This information is gathered by means of the automated collection of user- generated content. This information could be of particular value to marketers to analyse market trends and, therefore, could be very valuable to the social network site as a potential revenue stream (Boyd & Ellison, 2008: 220).

Providing marketers with information about the behaviour of visitors to their sites can thus be a promising source of revenue for social network sites. However, social network sites should tread lightly when sharing this information as users of these sites are sensitive to the sharing of their private information with third parties.

3.6 SUMMARY

Social network sites were defined and the components thereof discussed in more detail in this chapter. In addition, the concept of ‘friending’ or connecting with others, which is at the heart of social network sites, was examined. In order to gain a proper understanding of social network sites, the technological basis of social network sites, WEB 2.0, and the advantages of this new interface technology, were outlined. The development of social network sites over time provided further insight into the concept of social networking, and was followed by an explanation of the different types of social network sites, and also social capital, as the social network ‘currency’. An in-depth discussion of the use and value of social networks as marketing medium concluded the chapter.

In the next chapter the focus falls on the theoretical foundation of the study.

Chapter 4

THEORIES ON THE ACCEPTANCE AND USAGE OF NEW TECHNOLOGY

4.1 INTRODUCTION

Lin (2008: 433) highlights the fact that the exponential increase in commercial websites at which consumers can purchase their needs satisfying goods and services, has amplified the need for marketers to understand the factors that influence users to accept new technology and thus ultimately influencing their intentions to shop online. Acceptance is conceptualised as the outcome variable of a psychological process the user engages in when making a decision whether or not, in a technological context, to accept and use new technology. The acceptance of new technology in this context refers to the observable willingness of users to use technology for its intended purpose (Dillon & Morris, 1996: 4).

It is important for both academic researchers and marketers to understand the determinants of the acceptance of information technology so that better methods for designing, evaluating, and predicting how users respond to new technology can be developed. The lack of user acceptance represents a significant barrier to the success or failure of new technology (Dillon & Morris, 1996: 4).

According to Dillon and Morris (1996: 6), it is very unlikely that a single-variable model is able to adequately predict the acceptance of new technology and they propose combining several variables from various disciplines, including technology, psychology and marketing into a comprehensive model. It is, therefore, important to explore a range of perspectives of acceptance in order to place the expanded Theory of Planned Behaviour, which forms the basis of this study, into the larger context of user acceptance theory.

Compeau, Higgins and Huff (1999: 145) identify the following prominent models and theories for user acceptance of technology: the innovation diffusion model, the Technology Acceptance Model, the Theory of Planned Behaviour and the Social

Cognitive Theory. Venkatesh *et al.* (2003: 425) include a number of additional models and suggest the existence of eight prominent models in the user acceptance literature, namely: the Theory of Reasoned Action, the Technology Acceptance Model, the Motivational Model, the Theory of Planned Behaviour, a model combining the Technology Acceptance Model and the Theory of Planned Behaviour, the Model of Personal Computer Utilisation, the innovation diffusion theory, and the Social Cognitive Theory.

This chapter reviews seven of the eight models suggested by Venkatesh *et al.* (2003: 425), that attempt to predict the acceptance of new technology. These models are best suited for the unique nature of social network sites and were therefore used for the decomposed model of technology acceptance proposed for this study. In the next chapter, the Theory of Planned Behaviour is decomposed to include a number of additional constructs and the model that combines the Technology Acceptance Model and the Theory of Planned Behaviour will be discussed in detail.

A number of the user acceptance models discussed in this chapter focus not only on the dispositional characteristics of the individual, as inputs or antecedents to the model, but also analyse the outcomes or uses of technology. The outcomes or gratifications as motivations for the use of social network sites are also explored in this chapter.

4.2 THE THEORY OF REASONED ACTION

Allport (1935: 3) claims that the construct attitude is, in all likelihood, the most prevalent concept in modern American social psychology. Attitude towards an object refers to an individual's dispositional attitude towards an object and will lead to that individual behaving consistently positively or negatively towards that object. Attitude has been used as a means to account for the consistent behaviour of a person towards a specific object or stimulus.

However, a number of studies have questioned the attitude-behaviour relationship and a review of literature reveals a lack of empirical support for the prevalence of such a dispositional attribute in individuals that consistently influence the individuals' actions and words (Wicker, 1969: 75). The explanations for the low attitude-

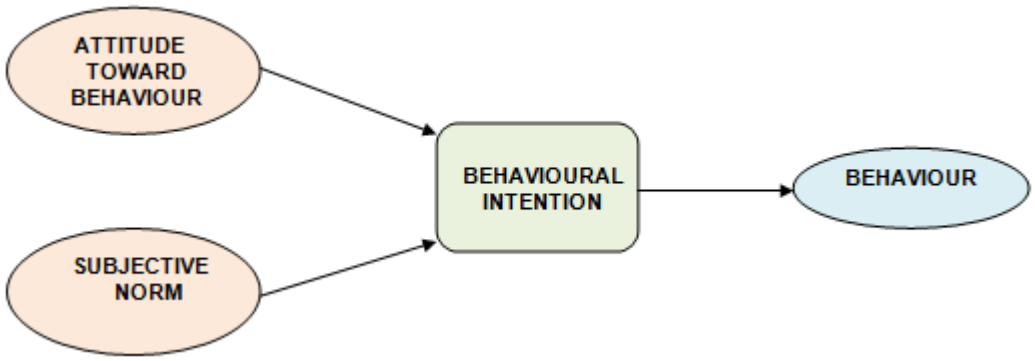
behaviour relationship are based on the argument that a single attitude score is insufficient to represent all the attitudinal components. In other words, the multi-dimensional components of attitude should also include additional components such as the cognitive and affective components, susceptibility to norm influence, habits and personality characteristics, to explain attitudes.

In the seminal work of Ajzen and Fishbein (1973: 41), which is regarded as the origin of the Theory of Reasoned Action, the existence of the relationship between attitude and behaviour was examined. The Theory of Reasoned Action also specifies the antecedents of behavioural intention and explores the claimed low attitude-behaviour relationship in an attempt to integrate the other suggested attitude dimensions into a single conceptual framework.

The Theory of Reasoned Action, as based on the Dulany (1968) theory of propositional control, is concerned with predicting a specific behavioural intention in a specific situation, that influences subsequent behaviour. Ajzen and Fishbein (1973: 42) modified the theory of propositional control and propose two major factors that influence behavioural intention, namely an attitudinal factor and a normative factor. The resultant Theory of Reasoned Action, which draws on social psychology, is one of the most important and powerful theories of human behaviour (Venkatesh *et al.* (2003: 428) claim. The Theory of Reasoned Action is graphically illustrated in Figure 4.1.

FIGURE 4.1

THE THEORY OF REASONED ACTION



Source: Davis, Bagozzi & Warshaw, 1989: 984.

4.2.1 Attitude towards a specific behaviour

The Theory of Reasoned Action posits that an individual's attitude towards a specific behaviour is determined by the individual's beliefs regarding the consequences that his/her behaviour might have, as well as the affective evaluation of the probability of such consequences occurring for the given behaviour (Fishbein & Ajzen, 1975: 302). Dillon and Morris (1996: 15) suggest that affective evaluation is a dispositional, internal reaction based on a probable consequence of specific actions or verbal utterings. The attitude construct, as operationalised in the Theory of Reasoned Action, is general and dispositional in nature and is not based on any specific set of beliefs.

4.2.2 Subjective norm

In addition to attitude, intentions to act are also influenced by subjective norm which refer to the perception that the majority of people whom an individual regard as influential in his/her life, believes that the individual should or should not behave in a certain manner (Fishbein & Ajzen, 1975: 302).

It is operationalised, then, that a positive attitude and favourable subjective norms with a better perception of control, lead to a strong intention to behave in a specific way.

The Theory of Reasoned Action, therefore, represents a generalised model attempting to explain the factors that influence human behaviour when making decisions. Sheppard, Hartwick and Warshaw (1988: 328) found that the Theory of Reasoned Action performed extremely well in the prediction of choice among alternatives. The authors also concluded that the theory was exceptionally robust and offered strong predictive utility, even when it was applied outside the original boundary conditions of the theory.

4.3 THE TECHNOLOGY ACCEPTANCE MODEL

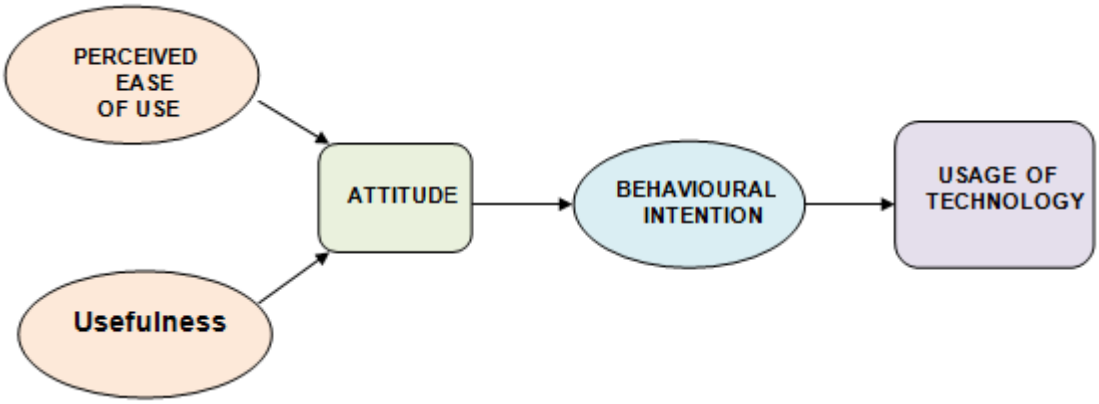
The Theory of Reasoned Action has a wide range of applications in various disciplines, but is regarded as a general model from which specific models are

derived. One of the most cited derivatives of the Theory of Reasoned Action is the Technology Acceptance Model, as is evident by the fact that the model produced 17 689 citations from a Google scholar search on 20 November 2013. According to Davis (1989: 319), technology offers significant potential to improve employees' performance, but is often not utilised due to the unwillingness of users to accept and use new technology. The authors claim that research prior to 1989 has been constrained due to a lack of high-quality measures of user acceptance of new technology, with the usage correlation varying substantially, depending on the set of constructs used in a particular study. The development of improved measures to assess user acceptance was identified as a research priority, leading to the development of the Technology Acceptance Model.

The Technology Acceptance Model (TAM) is derived from the following theories: the expectancy theory, the self-efficacy theory, the behavioural decision theory, the innovation diffusion theory, marketing theory and the human-computer interaction theory. The Technology Acceptance Model attempts to predict user acceptance of technology based on two factors, namely *Perceived usefulness* and *Perceived ease of use*. The Technology Acceptance Model is graphically illustrated in Figure 4.2.

FIGURE 4.2

THE TECHNOLOGY ACCEPTANCE MODEL



Source: Davis *et al.* (1989:985)

4.3.1 Perceived usefulness

According to Davis (1989), *Perceived usefulness* is the extent to which an individual believes a specific technology is beneficial to his/her job-related productivity. The construct, *Perceived usefulness*, was based on the study of Schultz and Slevin (1975) and Robey (1979). Both of these studies determined that the 'performance' dimension related the highest towards self-predicted usage of information systems. Robey (1979: 537) concluded that the adoption rate of new technology is dependent on the perceived benefit that the new technology has on performance, and is rejected if the perceived benefit is absent, regardless of the efforts of management to implement and enforce the use of new technology. Swanson (1987) introduced the construct of 'channel disposition' and found items described as 'important', 'useful' and 'valuable' loaded strongly onto the value dimension, which is closely related to *Perceived usefulness*.

4.3.2 Perceived ease of use

Perceived ease of use refers to the extent to which an individual believes that using a specific technology is physically and mentally effortless (Davis, 1989). *Perceived ease of use* is embedded in the self-efficacy theory which is defined as the perception of individuals regarding their ability to efficiently handle a number of work-related situations. The self-efficacy theory, however, is operationalised as situation-specific, and as such, needs to be adapted in order to function as a general measure of new technology acceptance. The Swanson (1987) study further identified items described as 'convenient', 'controllable', 'easy' and 'unburdensome' which correspond with the Technology Acceptance Model's definition of *Perceived ease of use*.

4.3.3 Other theories adding to the Technology Acceptance Model

The cost-benefit paradigm, which explains the process of decision-making in terms of a cognitive trade-off between the efforts needed to implement a specific strategy and the quality of the decision resulting from the chosen strategy, also influenced the *Perceived usefulness* and *Perceived ease of use* constructs. The cost-benefit paradigm is primarily used as an objective measure and, therefore, was adapted in

order to be used as a self-reported, subjective measure based on the perception of users. Another study that influenced the Technology Acceptance Model is that of Larcker and Lessig (1980), who identify two distinct factors: 'perceived importance' and 'perceived usableness'. Perceived importance is the perception individuals have of a specific situation, which causes individuals to assign a specific attention priority to that situation. Perceived usableness is the perception individuals have that information is simple, understandable and, therefore, usable. These two factors are similar to the definitions of *Perceived usefulness* and *Perceived ease of use*, but Larcker and Lessig (1980: 123) refer to these factors collectively as '*Perceived usefulness'* and do not distinguish between these factors as the Technology Acceptance Model does.

The Technology Acceptance Model predicts that *Perceived usefulness* and *ease of use* influence the attitude of the user towards the use of technology either favourably or unfavourably. The attitude of the user on the other hand, influences the behavioural intention of the user, which in turn, determines the actual usage of technology.

4.3.4 A comparison of the Theory of Reasoned Action and the Technology Acceptance Model

Dillon and Morris (1996: 13) point out a number of differences between the Theory of Reasoned Action and the Technology Acceptance Model. Firstly, they argue that the subjective norm construct is dependent on a specific context and that empirically it is not an important predictor of intentions and was therefore, excluded from their model.

Secondly, the authors' empirical results suggest that there is a direct path from *Perceived usefulness* to intention, which is in contrast with the Theory of Reasoned Action. The explanation that Dillon and Morris (1996: 6) offers is that attitude is responsible for mediating the relationship between beliefs and intention. Furthermore, they argue that in a work environment individuals are often forced to use new technology regardless of their attitude towards it.

Lastly, they found a direct effect of *Perceived ease of use* on *Perceived usefulness*. In other words, if a user is faced with two systems offering the same functionality, the

user finds the system that is easier to use, to be more useful. They did not report any empirical support for the converse relationship (that *Perceived usefulness* influences *Perceived ease of use*).

However, prior research indicates that the TAM was successfully applied to Internet–related technology and services such as Internet banking, online shopping, and software applications (Suh & Han, 2002; Gefen, Srinivasan Rao & Tractinsky, 2003). The Technology Acceptance Model is a parsimonious model, applicable to different contexts and provides accurate predictive results. However, the Technology Acceptance Model is not sufficient to offer a deeper understanding of the adoption of new technology (Park, Lee & Cheong, 2008: 163) suggesting that alternative models that incorporate motivational elements may contribute to our understanding of technology acceptance.

4.4 THE MOTIVATIONAL MODEL

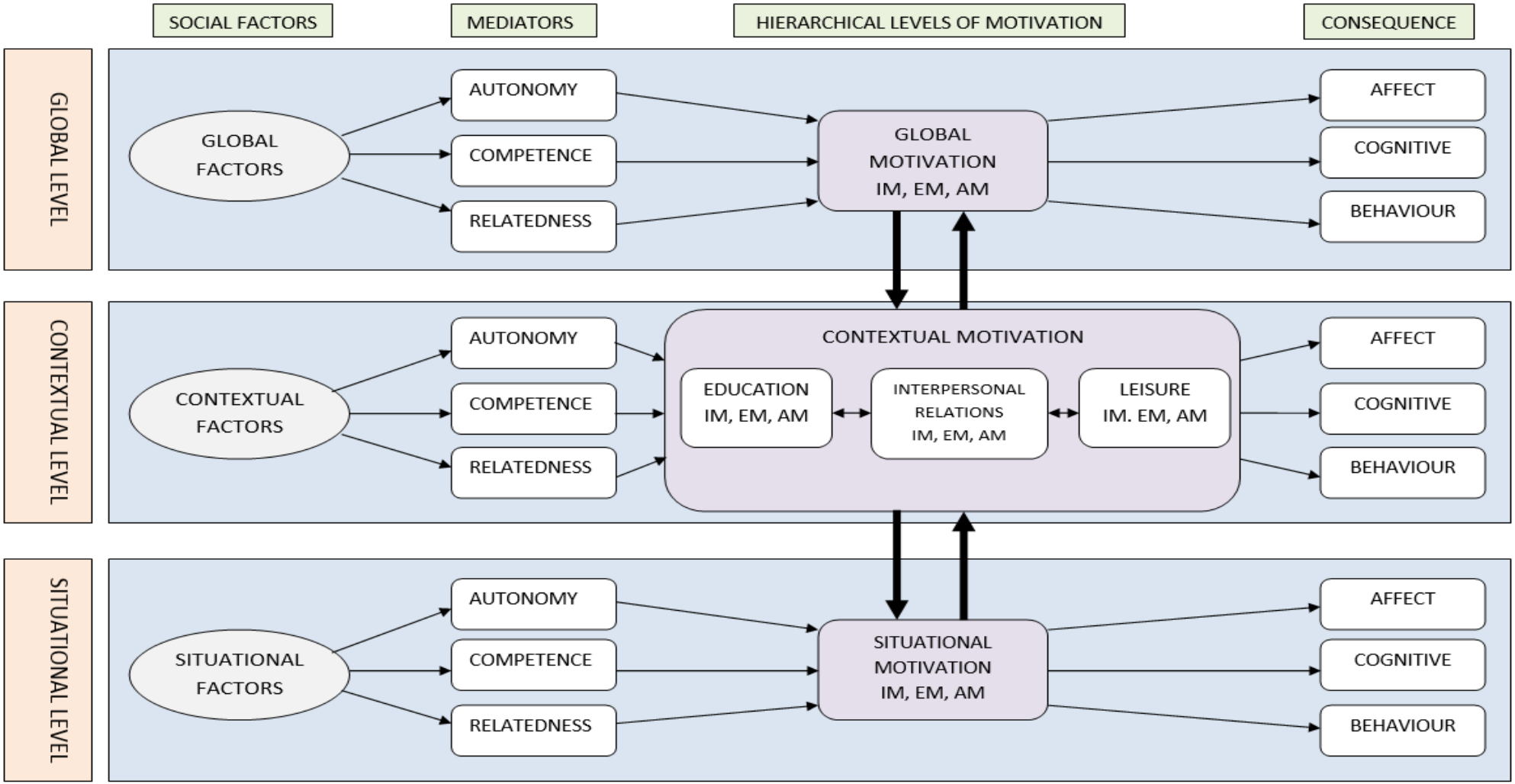
A vast amount of research in psychology investigated motivation as a general predictor of behaviour (Venkatesh *et al.*, 2003: 469). One such model was developed by Vallerand (2000: 312) who constructed a hierarchy model of motivation that suggests that motivation is a multi-dimensional construct that consists of three levels of generality that have inter-relationships among the motivational elements, and that motivation has both determinants and consequences.

4.4.1 Motivation as multi-dimensional construct

The Motivational Model has as its core constructs: extrinsic motivation, intrinsic motivation and amotivation, or absence of motivation. Intrinsic and extrinsic motivation should not be seen as dichotomous, but rather as a continuum which ranges between intrinsic and extrinsic, consisting of: intrinsic motivation, integrated regulation, identified regulation, introjected regulation, external regulation and amotivation (Vallerand, 2000: 312). A diagrammatical representation of the Motivational Model can be seen in Figure 4.3.

FIGURE 4.3

THE MOTIVATIONAL MODEL



Source: Davis *et al.* (1989: 985)

4.4.1.1 Intrinsic motivation

Intrinsic motivation refers to the extent to which an individual believes that acting in a specific manner will result in a favourable outcome that will benefit the individual in some way, including improved job-related productivity (Davis *et al.*, 1992: 1112). Vallerand and Ratelle (2002: 42) describe intrinsic motivation as acting in a certain manner because of the resultant satisfaction of needs and wants it provides. There are three dimensions of intrinsic motivation, namely to know, to accomplish and to experience stimulation. Firstly, an individual engages in an activity as a result of satisfying the need to improve him/herself, create something more or achieve something. Secondly, an individual engages in an activity as a result of satisfying the need to “surpass oneself, creating, or accomplishing something" Vallerand and Ratelle (2002: 42). Lastly, an individual engages in an activity as a result of satisfying the individual’s need for sensory stimulation and the affective and psychomotor sensations emanating from it.

4.4.1.2 Extrinsic motivation

Extrinsic motivation, on the other hand, is the belief that acting in a specific manner is either due to an external stimulus, or the belief that not behaving in a specific manner could lead to negative consequences. The behaviour does not contain any inherent reason for behaving in that manner, apart from attaining the specific outcomes (Davis *et al.*, 1992: 1112).

Originally extrinsic motivation was simply seen as behaviour performed without the individual having a choice whether or not to perform such behaviour. The concept evolved into a construct with identifiable types of extrinsic motivation, with varying degrees of self-determination, ranging from non-self-determined to self-determined. The first type of external motivation is external regulation, which is an action performed in order to attain a positive end or to avoid a negative one. External regulation forms the non-self-determined anchor on the continuum of extrinsic motivation. The second type of external motivation is introjected regulation where an individual responds to a stimulus from the environment and internalises it, which then forms the reason for behaving in a certain way in the future in order to avoid feelings of shame and internal pressure. The third type of external motivation is identified

regulation, where the reason for an individual engaging in an activity is internalised as being valuable. The final type of external motivation is integrated regulation, which is the choice to engage in a specific activity that is consistent with the individual's self-structures. Integrated regulation is considered the most self-determined type of external motivation.

4.4.1.3 Amotivation

Amotivation is the psychological state of an absence of motivation, when an individual does not act with intention to obtain any specific outcome. Amotivation is sometimes referred to as learned helplessness, where individuals feel incompetent and feel they have no control over what happens to them. Amotivated individuals feel their behaviour is completely at the mercy of external forces.

4.4.2 Hierarchical levels of generality

The second proposition of the Motivational Model is that intrinsic motivation, extrinsic motivation and amotivation occur at three hierarchical levels of generality. The first level, which is at the top of the hierarchy, is the global level or general personality of the individual and refers to the dispositional attributes of individuals generally to act, based on intrinsic or extrinsic motivation. The second hierarchical level is the contextual level or life domain of the individual and refers to the specific context (including demographical characteristics) that an individual finds himself/herself in that influences the perception of the motivation for behaving in a specific manner. The last, and most fundamental, level is the situational level or state of the individual and refers to the unique situation and environment an individual finds himself/herself in, at any given moment in time (Vallerand, 2000: 313).

4.4.3 Motivational determinants

Motivation is also a result of social influences at each of the three levels of generality. Stated differently, situational factors can affect situational motivation. Contextual factors can affect contextual motivation and global factors can affect global motivation. These social influences, at each hierarchical level, are mediated by perceptions of competence, autonomy, and relatedness or need satisfaction. The

hierarchical construction of the Motivational Model implies a number of inter-relations. Firstly, it implies a top-down effect, where higher level motivation influences lower levels. Secondly, a bottom-up effect exists, where lower levels of motivation have an effect on the higher levels. Lastly, interplay exists within the different types of contextual motivation.

4.4.4 Psychological consequences

The final construct of the Motivational Model suggests that motivation produces psychological outcomes or consequences, which consist of four dimensions. Firstly, motivational outcomes can be cognitive, affective or behavioural. Secondly, intrinsic motivation causes the most positive consequences, whereas extrinsic motivation and amotivation result in the most negative consequences. Lastly, consequences occur at all three levels of generality (situational consequences, contextual consequences and global consequences).

Access to technology does not mean it will be used efficiently; factors like the motivational issues referred to, as well as attitudinal factors play an important role in an individual's usage of computers.

4.5 THE MODEL OF PERSONAL COMPUTER UTILISATION

The fact that knowledge workers and general consumers have access to technology does not guarantee the use of it, or alternatively, that available technology is used efficiently and effectively. To better understand the factors that influence personal computer usage, the relationship between attitude and computer utilisation needs to be examined. Triandis (1979) adapted the Theory of Reasoned Action (Ajzen & Fishbein, 1973) by modifying some constructs and defining a number of additional constructs, which led to the development of the Model of Personal Computer Utilisation (Thompson, Higgins & Howell, 1991: 126).

The initial model suggested by Triandis (1971) asserts that individuals behave in a specific manner based on their attitudes or "what they would like to do"; their susceptibility to norm influence or "what they think they should do"; their habits or

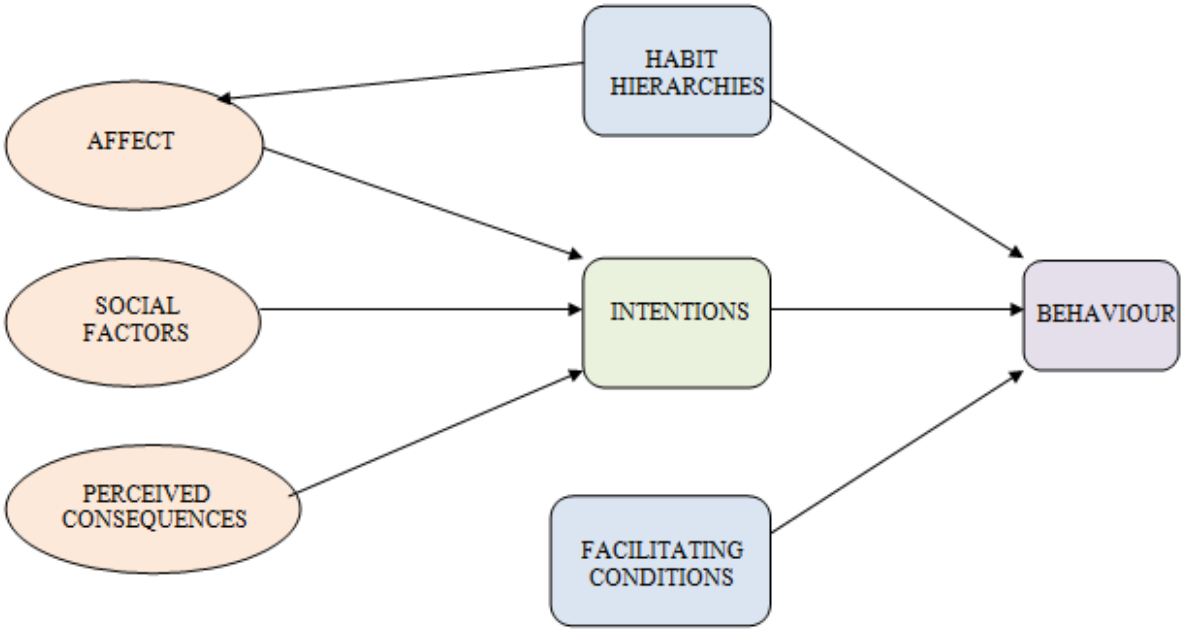
"what they have usually done" and lastly, their perceived probabilities that a specific action leads to a specific outcome.

The Model of Personal Computer Utilisation divides attitude into three dimensions, namely cognitive, affective and behavioural attitudes. The cognitive component of attitude involves the belief that technology facilitates the effective and efficient completion of tasks. The affective component has a like/dislike connotation and thus affects the 'feelings' users have towards using technology. The behavioural component represents intention to do with regard to using, or learning to use, new technology (Thompson *et al.*, 1991: 126).

Triandis (1979) later developed a more comprehensive model which posited that social factors, affect and perceived consequences influence behavioural intention, which in turn, influence behaviour. In addition, behaviour is directly and indirectly affected by habit and also by facilitating conditions that either encourage or discourage behaviour. Figure 4.4 offers a visual representation of the expanded Model of Personal Computer Utilisation.

FIGURE 4.4

THE MODEL OF PERSONAL COMPUTER UTILISATION



Source: Davis *et al.* (1989:985)

4.5.1 Social factors

Triandis (1979: 210) describes social factors as the collection of assimilated subjective cultural norms of a specific group, together with tacit social contracts between members of a group, where the latter agree to behave in a specific way towards one another in a specific context or situation. From this definition, it is posited that subjective culture consists of norms, roles and values. Norms are the voluntary adherence to a specific behaviour as expected by other members of a specific cultural or sub-cultural group; roles refer to the hierarchical position that an individual holds in a specific cultural group and which directly influences how that individual behaves within that cultural group; and values refer to the categories of behaviour that are affectively driven by members of a specific culture or social group (Thompson *et al.*, 1991: 126).

The posited relationship between susceptibility to norm influence and behaviour is consistent with innovation theory, the Theory of Reasoned Action and the Technology Acceptance Model. The innovation theory posits that the compatibility of new innovations with existing norms has a significant influence on technology adoption (Tornatzky & Klein, 1982: 28). The relationship between susceptibility to norm influence and behaviour also concurs with the Theory of Reasoned Action (Ajzen & Fishbein, 1977). The Technology Acceptance Model developed by Davis (1989) showed no significant empirical relation between susceptibility to norm influence and usage, but indicated that this unexpected finding was due to the weak psychometric properties of the social norm scale used (Thompson *et al.*, 1991: 127).

4.5.2 Affect

Affect is defined as the emotive basis for specific behaviour in a particular cultural or social situation (Triandis, 1971: 2). These emotive bases include feelings of happiness, delight, pleasure, depression, revulsion, discontentment or hate that an individual assigns to a specific action (Triandis, 1979: 211).

4.5.3 Perceived consequences

Triandis (1979: 211) describes perceived consequences as the perception that behaviour can lead to potential consequences that have a specific value, and an

associated probability that a particular consequence should occur. Triandis (1971: 2) acknowledges the fact that perceived consequences are a multi-dimensional construct consisting of several components. In a technological context, three dimensions of perceived consequences are suggested by Thompson *et al.* (1991: 128), namely complexity, job fit and long-term consequences of use.

Complexity refers to the degree of difficulty of understanding and using technology and has an inverse relation to adoption, meaning that the more complex new technology is perceived to be by the users, the least likely users are to adopt it. Complexity is the opposite of the *Perceived ease of use* construct of the Technology Acceptance Model. Job fit refers to the perception by users that the technology enhances their job performance and is similar to *Perceived usefulness* in the Technology Acceptance Model. Long-term consequence of use, as the final component of perceived consequences, refers to a payoff in the future that occurs as a result of the adoption of the new technology.

4.5.4 Facilitating conditions

Facilitating conditions are defined by Triandis (1979: 205) as “objective factors, ‘out there’ in the environment, that several judges or observers can agree, make an act easy to do”. In a technological context, facilitating conditions include both access to technology as well as training and technical and operational support.

4.5.5 Habits

The final construct in the Model of Personal Computer Utilisation is habits, which are defined by Triandis (1971: 3), as a series of behaviour that takes place without a specific conscious input by an individual, and without consideration of the possible consequences of such behaviour. Thus, technological context behaviour could be influenced by habits rather than factors of efficiency and is, therefore, included in the Model of Personal Computer Utilisation.

The Model of Personal Computer Utilisation focuses on people’s reaction and behaviour when confronted with computer technology; it confirms that the individual’s attitudes, norms, habits and perceptions regarding the use of computers play an

important role in how the user will interact and experience computer technology. The acceptance or rejection of new computer developments by individuals is significant, and needs to be investigated – why, for instance, do certain individuals embrace new technology while others fear and reject it?

4.6 THE INNOVATION DIFFUSION THEORY

Agarwal and Prasad (1998: 204) pose the question why certain individuals adopt new information technology, while others do not. This question, which has been phrased in a number of ways, including information systems implementation, technology adoption and technology acceptance, has been the topic of study for a number of decades. An important reason for this interest is the fact that the effective and efficient assimilation of new technology (the innovation diffusion) in an organisation has become a critical part of the survival of organisations worldwide.

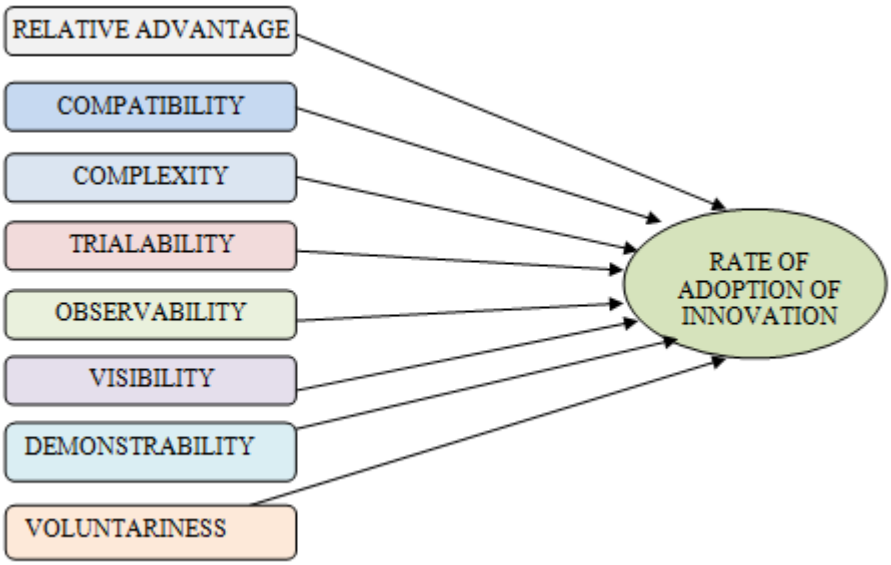
Innovation diffusion refers to the adoption or diffusion of an innovation from initial introduction to the widespread use of it, and attempts to explain the differences in the time taken to reach this point. The rate of adoption is defined as how fast an invention is accepted by a specific market. It is gauged by counting the number of people who accepted new ideas over a specific period (for example a year). The rate of adoption is a numerical gauge of the gradient of the adoption curve for an invention (Rogers, 1995: 206).

Innovation diffusion, which is essentially an uncertainty-reduction process, initially attempted to account for differences in time taken by concentrating on the different characteristics of users of innovation, also referred to as the innovativeness of users. Rogers (1995: 204), whose work is generally regarded as the basis of innovation in diffusion theory, recognised the fact that innovation diffusion is not only influenced by the innovativeness of the users, but is also influenced by the complexity, tolerability and observability characteristics of the innovation itself, which have a major impact on predicting the adoption rate of new technology. Rogers (1995: 206) identified five perceived attributes of innovation, namely relative advantage, compatibility, complexity, trialability and observability. Moore and Benbasat (1991) propose three additional constructs namely visibility, demonstrability and voluntariness.

The constructs of the Innovation Diffusion Theory is represented in Figure 4.5.

FIGURE 4.5

THE INNOVATION DIFFUSION THEORY



Source: Researcher's own compilation

4.6.1 Relative advantage

Relative advantage is the extent to which an innovation is seen to be superior to the one it is replacing and the advantage is often expressed as "economic profitability, social prestige, or other benefits". The characteristics of both the innovation and the characteristics of the new users, influence which type of relative advantage is regarded as most important (Rogers, 1995: 206).

Economic factors influence the rate of adoption, because a decrease in the price of a new product generally increases the rate of adoption. The reduction of costs is compounded by the economies of scale, and further lower prices, leading to an exponential increase in the adoption rate. The desire for social status among reference groups may also lead to an exponential increase in the adoption rate. For certain innovations the social status even outweighs the benefit the user would receive from the innovation itself. The desire for social status varies among individuals, as some people are more highly motivated by status than others. It is suggested by Rogers (1995: 216) that there exists a concomitant relationship

between the perceived relative advantage of an innovation and the rate of adoption thereof.

4.6.2 Compatibility

Compatibility is the extent to which a new innovation is consistent with already existing “values, past experiences, and needs of potential adopters” (Rogers, 1995: 224). An innovation is classified as compatible if the new innovation is consistent with existing attitudes and beliefs, or perceived as incompatible, if there exists a large discrepancy between the characteristics of the new innovation and existing perceptions (Rogers, 1995: 224).

If an innovation is incompatible with social cultural values and beliefs, it can slow down or even completely prevent its adoption; therefore, compatibility is important in predicting the rate of adoption. Cultural incompatibility often occurs when an innovation has initially been designed with a specific culture in mind, but is then marketed in another geographical location, with a different prevalent culture.

In addition to deeply embedded cultural values and beliefs, previously adopted ideas also speed up or slow down the rate of adoption, depending on whether the adopted ideas are compatible with the new innovation or not. Considering that innovation adoption is an uncertainty-reduction process, any new innovation is compared to what is familiar, in order to be interpreted and thereby decrease the uncertainty. The more compatible a new innovation is with existing ideas, the less change of behaviour is required and, therefore, less uncertainty is present. In addition, if the process of innovation adoption is perceived as positive, the faster the adoption of future innovations will be. Furthermore, the degree to which an innovation is perceived as meeting the existing needs, the faster the rate of adoption will be. It is important for the adoption of an innovation that consumers perceive the innovation as a response to expressed needs, rather than a marketing attempt to cultivate needs. In other words there exists a positive relationship between the compatibility of an innovation and the rate of adoption thereof (Rogers 1995: 234).

4.6.3 Complexity

An innovation is perceived as being complex if the average user has difficulty in understanding how to use the new innovation. Complexity can be classified on a complexity-simplicity continuum. If a user perceives a new innovation as simple, clear and easy to learn and use, the innovation is referred to as simple, but if the innovation is intricate and complicated to learn, the innovation is regarded as complex. There is a negative relationship between complexity and the rate of adoption of new innovations (Rogers, 1995: 242). In other words, the more complex the innovation, the least likely it will be accepted quickly by users.

4.6.4 Trialability

Trialability is the extent to which users can use innovation in smaller instalments, rather than having to adopt a new innovation immediately and in its entirety. The ability to use new technology in smaller instalments provides a transitional phase, which acclimatises the future user to use the new innovation and increases the adoption rate of the new innovation. There is a positive relationship between trialability and the adoption of a new innovation. (Rogers, 1995: 243).

4.6.5 Observability

Rogers (1995: 244) describes observability as the extent to which the results of using a new innovation can be seen by other members of a specific social group. If the results of using the new innovation can be observed easily by other members of a social group or if the results of the new innovation is easily communicated to new users, then the rate of adoption of that innovation increases. In other words, there is a positive relationship between the observability of an innovation and the adoption rate of it.

4.6.6 Additional innovation diffusion constructs related to information systems

Apart from the five perceived attributes of innovation diffusion identified by Rogers (1995), three additional constructs are added by Moore and Benbasat (1991), namely visibility, demonstrability and voluntariness. Visibility refers to the extent to

which a user can be seen to use a new innovation by other members of a specific social group. Result demonstrability refers to the extent to which the results are apparent or can be shown to the new adopter, and voluntariness indicates the degree to which the new innovation is under the volitional control of the new adopter (Plouffe, Hulland & Vandenbosch, 2001: 210). In other words, the user's usage of the new innovation must be visible, must have ostensible results and must occur willingly.

4.7 THE SOCIAL COGNITIVE THEORY

Building on the Theory of Reasoned Action (Ajzen & Fishbein, 1973) which suggests that individuals will adopt new technology if they perceived a beneficial outcome from using it, Bandura (1977: 191) introduced the concept of self-efficacy, which forms the basis for the Social Cognitive Theory. Self-efficacy refers to the perception that an individual has regarding his/her personal ability to organise and implement specific behaviour to realise specific outcomes. Self-efficacy is focused on the ability to act and achieve outcomes, rather than the dispositional abilities of the individual (Bandura, 1986: 391).

Bandura (1977: 191) hypothesised that psychological procedures alter the level and strength of self-efficacy. An individual's perception regarding his/her abilities affects the stage at which 'coping behaviour' will be initiated, as well as the extent and duration of the specific behaviour when difficulties are encountered. Expectations of self-efficacy are derived from the following informational sources: performance accomplishment, vicarious experience, verbal persuasion, and physiological states.

There are three distinct dimensions of self-efficacy namely magnitude, strength, and generalisability. The magnitude of self-efficacy relates to the perception of task complexity and the related ability to realise the required outcomes. Individuals with a high magnitude of self-efficacy believe that they have the ability to accomplish intricate outcomes, whereas individuals with a low self-efficacy magnitude believe that they are only able to accomplish simple outcomes. Self-efficacy strength is the perception of individuals regarding their ability to overcome problems they are faced with. Those with a strong sense of self-efficacy believe that they have the ability to

overcome all problems. On the other hand, those with a poor sense of self-efficacy easily become frustrated when facing problems, which diminish their sense of self-efficacy. Finally, generalisability of self-efficacy is defined as individuals' sense that self-efficacy is limited in scope to a few specific situations. If individuals believed that they are able to achieve certain outcomes only in a limited number of situations, then their self-efficacy is limited and not generalisable. In contrast, an individual who believes he/she can realise the desired outcomes in most situations, has a higher perception of generalisability and thus a higher sense of self-efficacy (Compeau & Higgins, 1995: 192).

In addition to self-efficacy, the Social Cognitive Theory includes the following environmental factors: social pressure, unique situational or environmental characteristics, cognitive factors and personality factors. These factors interact in such a way that everyone has a choice in which environments they wished to function in, and they are influenced by those environments. These individuals, on the other hand, influence these environments by their behaviour. In addition, a specific situation is further influenced by factors that are unique to that situation or environment and which influence the individual; these factors are again influenced by the behaviour of the individual. Over and above the environmental and situational factors, the behaviour of the individual is further moderated by his or her dispositional characteristics and cognitive thought processes (Compeau & Higgins, 1995: 191).

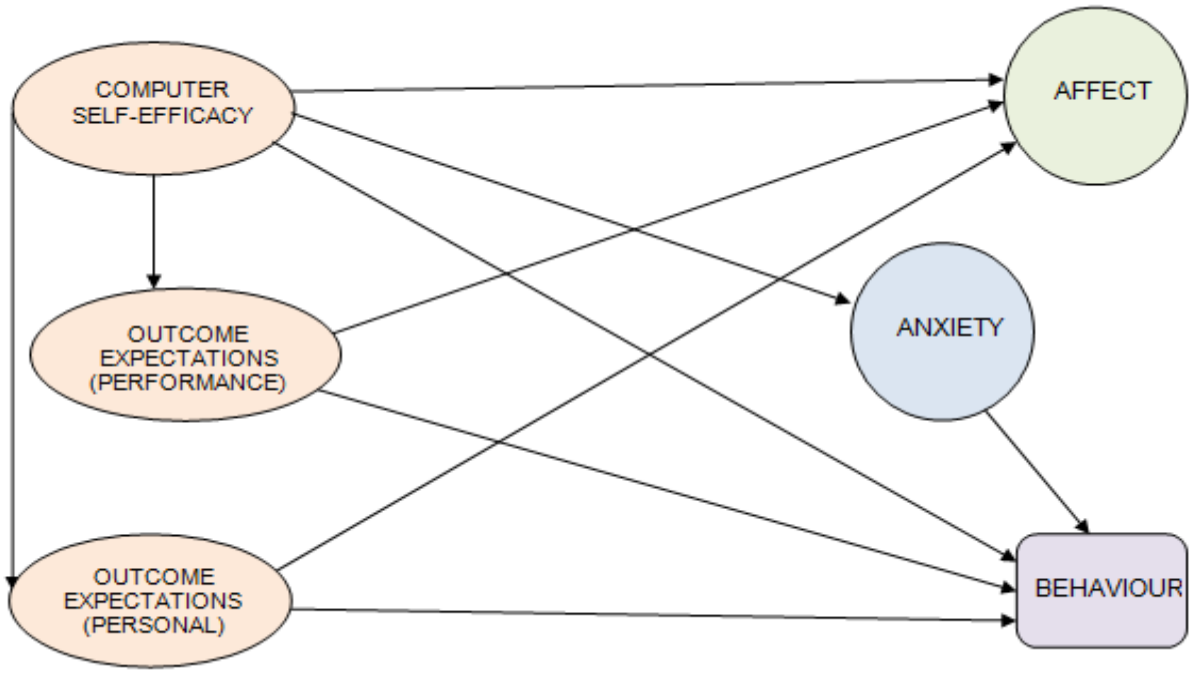
The Social Cognitive Theory of Bandura (1977) was further developed by Compeau and Higgins (1995) and Venkatesh *et al.* (2003), by testing the applicability of the theory in a technological context. The specific dimensions of the Social Cognitive Theory in a technological context consist of: *Internet self-efficacy*, performance-related outcome expectations, personal outcome expectations, affect and anxiety. *Internet self-efficacy* refers to an individual's beliefs regarding his or her competency with using a computer. Performance-related outcome expectations are defined as the perceptions of individuals of the effect that computer usage would have on the efficiency and effectiveness of their job performance. Personal outcome expectations refer to the perceived likelihood that computer usage will result in a change in image or status for the user. Affect refers to the positive *Perceived enjoyment* derived from

using a computer, whereas anxiety refers to the negative feelings of apprehension and anxiety that are associated with computer usage.

A representation of the proposed Social Cognitive Theory, in a technological context, is presented in Figure 4.6.

FIGURE 4.6

THE SOCIAL COGNITIVE THEORY



Source: Compeau, Higgins and Huff (1999: 147)

4.8 THE THEORY OF PLANNED BEHAVIOUR

The Theory of Planned Behaviour, which is an extension of the Theory of Reasoned Action, is "arguably the most widely researched" behavioural model (Armitage & Conner, 2001: 471). It is also the most cited theory on user acceptance - 23 716 times, according to a Google scholar (accessed on 9 December 2013). The Theory of Planned Behaviour is based on the work of a seminal paper entitled *The Theory Of Planned Behaviour* (Ajzen, 1991).

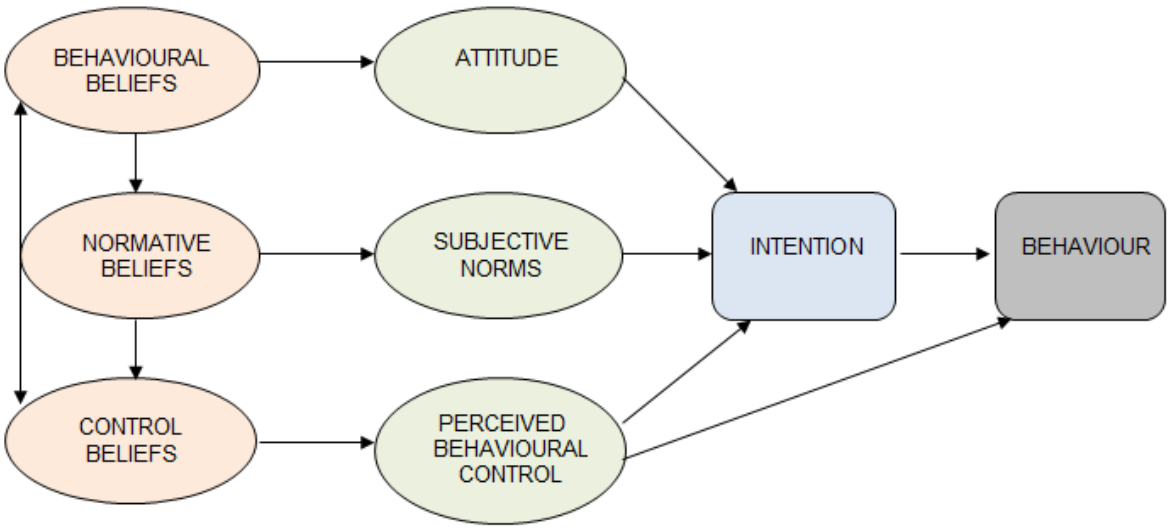
The Theory of Planned Behaviour adopts the main constructs contained in the Theory of Reasoned Action, namely an individual's intention to behave in a certain manner. Intention is seen as a collective construct for capturing motivational factors,

which in turn, influences behaviour. An individual's intention, however, can only influence behaviour if the behaviour in question is seen to be under the volitional control of the individual performing such behaviour. Most human behaviour is influenced to some extent by non-motivational factors, such as resources or situational opportunities, which are not under their direct volitional control. The extent to which a person perceives that behaviour is made easy or difficult, because of the influence of non-motivational factors, such as ability, is referred to as perceived behavioural control. Perceived behavioural control then is the additional construct that is added to the Theory of Reasoned Action, to finally construct the Theory of Planned Behaviour. It is important to note that perceived behavioural control is completely different from the construct locus of control. Locus of control is the belief that outcomes are the results of a person's own behaviour and is constant across situations, whereas perceived behavioural control varies across situations and is the perception of ease or difficulty of attaining an outcome, determined by factors beyond the individual's control (Ajzen, 1991: 184). Perceived behavioural control in a Theory of Planned Behaviour context is consistent with the perceived self-efficacy construct, which is operationalised by Bandura (1977: 122) as the perception of an individual of his or her ability to behave in a certain manner, as well as the ability to overcome problems in order to realise a specific outcome .

The Theory of Planned Behaviour investigates the antecedents of intentions and human behaviour. It is postulated that these antecedents consist of general salient information and beliefs relevant to specific behaviour. In addition to the dispositional antecedents of social attitude and subjective norm of the Theory of Reasoned Action, Ajzen (1991: 179) adds the factor perceived behavioural control. Perceived behavioural control serves as a factor in the dispositional approach to predict human behaviour, which is an attempt to overcome the limitations of the original Theory of Reasoned Action. These three antecedents then form the independent variables in the Theory of Planned Behaviour. The Theory of Planned Behaviour is illustrated in Figure 4.7.

FIGURE 4.7

THE THEORY OF PLANNED BEHAVIOUR



Source: Armitage and Conner (2001: 472)

4.8.1 Attitude

Attitude towards behaviour is operationalised in the Theory of Planned Behaviour as the extent to which an individual perceives specific behaviour to be favourable or unfavourable. The more favourable an individual's attitude towards a specific behaviour is, the stronger that individual's intention will be to perform the particular behaviour.

Empirical results indicate that the construct comprising the Theory of Reasoned Action, namely general attitude, is a good predictor of human behaviour in a specific situation.

4.8.2 Subjective norm

Subjective norm, the second factor of the intention to behave, refers to the subjective influences or social pressure to behave or not to behave in a certain manner. If a person perceives that significant others approve of a specific behaviour, then his or her intention to perform that behaviour is enhanced.

Subjective norm has been found to be a poor predictor of human behaviour in a specific context. In order to remedy this lack of predictive power, Ajzen (1991: 190)

argues that specific behaviours are grouped together from previous “occasions, situations, and forms of action”. The rationale behind this is that the combination of dispositional characteristics and the factors unique to a specific situation may lead to many unique situations and, therefore, a considerable number of possible outcomes. This large number of outcomes cannot be predicted with simple constructs. Several studies provide empirical support for this grouping or aggregation of behaviours that have shown a substantial increase in predictive power of attitudes and personality when attempting to predict behaviour, as compared to using individual measures.

4.8.3 Perceived behavioural control

The third determinant of the intention to behave, namely perceived behavioural control, is operationalised as the perception of individuals regarding their ability to realise a specific outcome and is based on the presence or absence of control beliefs. These control beliefs are influenced by the presence of positive control aspects such as the availability of information, skills and opportunities and the absence of negative control aspects or obstacles that could prevent the outcomes from being achieved. Perceived behavioural control is posited to not only affect intention and thereby indirectly behaviour, but also has a direct influence on behaviours, by influencing the perception whether a certain behaviour is achievable or not (Fishbein & Ajzen, 2011: 155).

As a general rule, the more favourable the attitude and subjective norm with respect to behaviour is, the greater the perceived behavioural control and the stronger an individual’s intention will be to perform the behaviour under consideration.

4.8.4 Expectancy values or beliefs of intention to behave

In addition to the three antecedents in the Theory of Planned Behaviour model, each antecedent also has an associated expectancy value or belief attached to it. According to Armitage and Conner (2001: 474), the perceived value or behavioural belief attached to a specific outcome, directly affects the attitude of the individual to perform a certain action. Subjective norms are seen as a function of salient normative beliefs, where individuals construct their personal subjective norms by subscribing to norms or social pressure that individuals or groups believe is

important for individuals to subscribe to. The presence of control beliefs regarding the availability of information, skills and opportunities will directly influence their perceived behavioural control.

4.8.5 The Theory of Planned Behaviour expressed as equations

Taylor and Todd (1995b: 149) describe attitude, subjective norms and perceived behavioural control in terms of several equations. Attitude is equated with an attitudinal belief that performing specific behaviour leads to a particular outcome, weighted by an evaluation of the desirability of that outcome. Subjective norm is formed as the individual's normative beliefs concerning a particular referent, weighted by the motivation to comply with that referent. Perceived behavioural control is formed as the sum of the control beliefs, weighted by the perceived facilitation of the control beliefs in either inhibiting or facilitating the behaviour.

4.8.6 A critical analysis of the Theory of Planned Behaviour

A number of weaknesses and criticisms relating to the Theory of Planned Behaviour have been cited. Firstly, most of the Theory of Planned Behaviour consists of perceptions, which are difficult to measure and, therefore, most studies are based on self-reported measures, with its related validity and reliability concerns. Secondly, (Ajzen, 1991: 179) suggests that perceived behavioural control and self-efficacy can be used interchangeably. A number of studies, however, suggest that these two constructs are not in fact the same and that self-efficacy relates to perceptions of internal control, whereas perceived behavioural control is more a reflection of external factors. Thirdly, it has been argued that attitude first influences desires, which leads to intentions and finally to direct action, rather than attitude directly influencing intentions. Fourthly, a number of studies indicated that subjective norm is the weakest predictor of intention, and as such, should be discarded. However, the weak predictive power of subjective norms may be due to unreliable measurement scales rather than the theoretical and conceptual weaknesses of the construct (Armitage & Conner, 2001: 478). Notwithstanding these criticisms, the Theory of Planned Behaviour still remains one of the most used behavioural models, and

researchers attempt to overcome the limitations of the theory by adapting or adding to the basic constructs of the theory.

4.8.7 Expanded acceptance models

The more recent developments in acceptance theory, including the Extended Technology Acceptance Model (TAM2), Extended Technology Acceptance Model in an e-commerce context (TAM3) and the Unified Theory of Acceptance and Use of Technology **(**UTAUT) all represent expansions and refinements of the fundamental theories. However, all the acceptance theories, including these recent developments, have been criticised for yielding inconsistent results in different contexts (Li, 2010: 14). Venkatesh, Morris, Davis and Davis (2003: 470), who originally constructed the UTAUT model, also highlights the importance of adapting the acceptance theory models for different contexts. It was therefore decided to construct a decomposed model from the fundamental constructs of acceptance theory, rather than using the models that had been expanded for a specific context. This was done to ensure that the model is specifically suited to the unique nature of social network sites.

4.9 USES AND GRATIFICATIONS OF SOCIAL NETWORK SITES

The theories discussed in the previous section all attempt to investigate consumer acceptance of new technology from a single, antecedental dimension. The distinctive, antecedental dimensions used in the theories consist of dispositional factors of individuals, environmental influences and factors inherent and unique to the innovation itself. To gain a complete understanding of the dimensions affecting user acceptance, it is important, in addition to the antecedents, to also consider the outcomes or gratifications sought from the use of new technology. By including uses and gratifications sought from social network use in this research, a more complete understanding of consumer acceptance of new media should result. Katz, Haas and Gurevitch (1973: 180) supports this view and posits that the uses and gratifications theory reverses the traditional question, namely, “what media do to people?” to “what people do with media?”.

The Theory of Reasoned Action, which forms the basis for many technology usage models, suggests that attitude towards technology is influenced by the individual's beliefs regarding the consequences or outcomes from specific behaviours. Similarly, the uses and gratifications theory suggest that users of social networks base their behaviour on the expectations regarding the outcomes, gratifications and needs that are satisfied by means of participation in social networks.

According to Ruggiero (2000: 3), the uses and gratification theory is based on a subsection of media effects research and was first used to study the social and psychological gratifications for using the radio, as early as 1942. Uses and gratifications can be viewed as a psychological communication perspective, which focuses on how individuals use mass media and other forms of communication, such as interpersonal communication, to fulfil their needs and wants. According to the uses and gratification perspective, media use is determined by a group of key elements including the needs and wants that are satisfied by means of social network use; the perceived psychological and social benefits form social network use; social network use as alternative communication medium, and finally, the consequences of social network use (Rubin, 2002: 530).

The reported application of the uses and gratification theory in a number of earlier studies, have been criticized by several authors. The criticism primarily focussed on the severe reliance on self-reports in the research; the fact that the researchers did not properly define the social origins of needs; the neglect to address the dysfunctional aspects of certain kinds of needs and the fact that the research focussed too much on the inventive diversity of the respondents (Ruggiero, 2000: 5).

Authors such as Rubin (1983: 41) noted that these researchers responded to the criticisms by replicating studies in a different context; refining their methodologies; comparing results of separate research projects and changing their paradigm by treating mass media as an integrated social phenomenon. Ruggiero (2000: 13) argues that notwithstanding the criticism of the uses and gratification theory, the theory makes a substantial contribution to the understanding of the increasingly complex new media acceptance phenomenon. The value of the uses and gratifications theory is that it adds an additional dimension to be investigated, over and above the antecedents or mediating constructs of media use.

According to Roy (2009: 878), the uses and gratifications theory is one of the “most influential theories in media research” and Sheldon (2008: 70) found the theory particularly useful to explore the motives around companionship and the community of social media. Therefore, the uses and gratifications theory was used to investigate the outcomes or motivations of social network site usage in this research. Joinson (2008: 1031) identify seven specific uses and gratifications of using Facebook. Factor one, which contains aspects predominantly concerned with keeping in touch by reconnecting with lost contacts and maintaining contact with existing friends, is a combination of surveillance and developing social capital and is, therefore, labelled ‘social connection’. Factor two named ‘shared identities’, comprises the joining of groups, organisations of events, and meeting of like-minded people, but is limited to the virtual context. ‘Sharing photographs’ is the third factor, and consists of the posting and viewing of photographs. Factor four is labelled ‘content’ which refers to gratification by means of online contact, such as applications, or quizzes. Factor five is named ‘social investigation’ and includes both social searching and social browsing for contacts. ‘Social network surfing’ is factor six and consists of the viewing of other people’s social networks as a means of finding out more about context. It involves ‘surfing’ by following the links of online friends. The final factor of user gratifications of Facebook is termed ‘status updates’, which consists of news feeds, information on recent activity and status updates.

In a cross-cultural study by Shin (2010: 479), the uses and gratifications are classified in five dimensions of social network site usage namely; *Perceived usefulness, Perceived enjoyment*, perceived involvement, perceived connectedness, and flow. *Perceived usefulness* is derived from the Technology Acceptance Model and is the degree to which somebody believes that using a particular system enhances his/her job performance. *Perceived enjoyment* refers to the using of a computer for hedonistic purposes, such as entertainment, rather than utilitarian purposes. Perceived involvement is the extent to which an individual engages or participates in a social network site. Perceived connectedness is operationalised as an emotional feeling of being connected to the world, its resources and people. Flow is a mental state in which an individual is totally immersed in what he/she is doing and is characterised by an energised focus as well as a feeling of success in a particular activity.

A more comprehensive set of gratifications are provided by Hsu (2007: 598), which consist of the following 10 gratifications:

- *Information-seeking* is the search for useful information.
- *Media drenching* indicates users' increased usage of online photo albums.
- *Diversion* refers to any form of entertainment from social network use.
- *Performance* refers to users' discussion of particular persons or things.
- *Narcissism* points to users' increase in social visibility.
- *Relationship* maintenance focuses on maintaining bonds with existing acquaintances.
- *Aesthetic experience* refers to affective-related gratification.
- *Virtual community* refers to the process whereby users try to establish a new social life online, and
- *Reference* refers to the accessing of user-generated content as reference, such as reviews of restaurants or other products (Hsu, 2007:598).

These gratifications form the measures of social network site user outcomes and are incorporated in this study. They are operationalised and discussed in more detail in the following chapter.

4.10 SUMMARY

This chapter briefly discussed seven models that attempt to explain the acceptance and usage of new technology. These seven models are: the Theory of Reasoned Action, the Technology Acceptance Model, the Motivational Model, the Theory of Planned Behaviour, the Model of Personal Computer Utilisation, the innovation diffusion theory, and the Social Cognitive Theory. In addition to the models of acceptance and usage of new technology, the outcomes of social network site uses and gratifications were also examined to place the decomposed Theory of Planned Behaviour, which is discussed in the next chapter, in the appropriate context.

Chapter 5

A DECOMPOSED, MULTI-DIMENSIONAL MODEL OF THE THEORY OF PLANNED BEHAVIOUR

5.1 INTRODUCTION

It is suggested by Cha (2010) that social networking sites have become a crucial part of communication media and that they have increased in importance among marketers. Venkatesh and Davis (2000: 186) emphasise the importance and need for extensive empirical research in order to understand user acceptance in a social network site context, so that marketers can better understand social network usage behaviour. Sun and Zhang (2006: 619) also highlight the importance of understanding user acceptance of new technologies and suggest that a major contributor to ineffective system use is the resistance of users to use new technology. The authors specifically call for empirical research that focuses on perceptual, attitudinal, and behavioural factors.

Lin (2006: 540) believe that social networks facilitate the formation of virtual communities with specific needs and wants, and these are satisfied by participating in these 'virtual communities'. Therefore, it is important for online marketers to take into account these needs, wants and motivators for "virtual community" participation when they design new marketing offers.

The Theory of Planned Behaviour (TPB) has, since its development some 20 years ago, proved to be a robust test for investigating consumer behaviour in a wide range of contexts. This theory should be the starting point to develop a model of user acceptance of technology (Sommer, 2011: 91). As previously discussed, a number of authors suggest the addition of behavioural factors to the Theory of Planned Behaviour. In this study, these additional factors are combined with the original Theory of Planned Behaviour to develop a comprehensive, integrated model, referred to as the decomposed Theory of Planned Behaviour. This model should improve the ability and the accuracy to explain consumer behaviour when using new technology (Armitage & Conner, 2001: 471).

5.2 THE DECOMPOSED THEORY OF PLANNED BEHAVIOUR CONSTRUCT

Ajzen (1991: 179) asserts that explaining human behaviour is a complex and difficult task, which consists of many levels, including the behavioural dispositions of individuals, the effect of past behaviour as well as the impact of environmental factors. The Theory of Planned Behaviour, as a theoretical model, should include additional predictors that have empirically been shown to affect user intentions or behaviour.

Decomposing the Theory of Planned Behaviour and including additional constructs is supported by extant literature. For instance, Taylor and Todd (1995a: 140) argue that the factors affecting the intention of users to use media is a "multi-dimensional construct" and any additional factor that adds to the predictive ability of the model, should be included. A decompositional approach has a number of advantages over the one-dimensional approach. Firstly, a decomposed belief construct consists of a number of dimensions, which provides a clear understanding of specific factors that influence behaviour and secondly, a decomposed construct provides a set of beliefs which can be applied across a variety of settings. Both Taylor and Todd (1995a: 140) and Lin (2008: 433) found that deconstructing the determinants of the Theory of Planned Behaviour results in an increase in the ability to predict behavioural intention and, therefore, provides a better understanding of the range of factors that should be taken into account when designing and implementing any new technology.

It is apparent that a multi-dimensional model is needed in order to better predict user acceptance of new technology. Compeau and Higgins (1995: 189) support an expanded Theory of Planned Behaviour although it "is still widely used today in the IS literature and has demonstrated validity. However, there is also a growing recognition that additional explanatory variables are needed". Lin (2006: 541) found that the Theory of Planned Behaviour provides explanatory power regarding member intentions to participate in virtual communities, which is the object of study of the current investigation. The authors suggest that the construct attitude should be decomposed into *Perceived usefulness, Perceived ease of use* and perceived trust. In addition, the construct of perceived behavioural control should be decomposed into *Internet self-efficacy* and facilitating conditions.

This decomposed model suggested by Lin (2006: 541) forms the basis for the decomposed model that is used in the present study.

5.3 A DECOMPOSED MODEL OF USER ACCEPTANCE OF NEW TECHNOLOGY

It is suggested by Compeau *et al.* (1999: 146), based on the acceptance of new technology theory, that a specific behaviour relating to technology is the outcome after considering the beliefs of the users regarding that technology and the affective response of the user when using that technology. These beliefs of users, also referred to as the 'cognitive basis of behaviour' are represented by various constructs in usage theories: the innovation diffusion model refers to innovating; the Technology Acceptance Model refers to *Perceived usefulness* and *perceived ease of use*; the Theory of Planned Behaviour construct is behavioural beliefs and outcome evaluations and outcome expectations in Social Cognitive Theory.

Compeau *et al.* (1999: 146) further point out that the Technology Acceptance Model and the Innovation Diffusion Theory focus mainly on the beliefs regarding technology and the outcomes of using it, whereas Social Cognitive Theory and the Theory of Planned Behaviour includes other beliefs that are not related to perceived outcomes. The Theory of Planned Behaviour (which is based on the Theory of Reasoned Action) added the additional construct of perceived behavioural control. Perceived behavioural control was incorporated as it is suggested that factors beyond the control of the individual influence his or her perception of whether or not behaving in a certain manner has positive or negative consequences. The Social Cognitive Theory adds the self-efficacy construct, which is an individual's belief regarding the ability to perform a certain action. It is for this reason that the Social Cognitive Theory has been used in studies relating to computing technology. The addition of perceived behavioural control in self-efficacy emphasises the fact that the individual's adoption of new technology relies on additional constructs over and above the benefits or outcomes of using new technology.

Based on the assertions above, which integrates the Technology Acceptance Model, the Theory of Planned Behaviour, the Innovation Diffusion Theory and the Social

Cognitive Theory, three distinct categories of constructs can be identified (Compeau *et al.*, 1999: 146). These categories represent the net benefits accruing as a result of the use of a particular system. The first category relates to the affective and dispositional responses of the individual; the second category refers to the characteristics of innovation; and the third category consists of the outcome expectations of the users of a particular system.

Similarly, Taylor and Todd (1995a: 142) decompose the Theory of Planned Behaviour by identifying the constructs attitude, subjective norms and perceived behavioural control. Attitude is decomposed into relative advantages, complexity and compatibility; subjective norms consist of normative influences, and perceived behavioural control can be decomposed into self-efficacy and facilitating conditions. In a study by Lin (2008: 435), investigating online shopping, the decomposed model of Taylor and Todd (1995a: 140) is combined with the Technology Acceptance Model and the Innovation Diffusion Theory to derive the decomposed model used in the present study. The construct relative advantage (used in the innovation diffusion theory) is replaced by the similar construct *Perceived usefulness,* as it is used in the Technology Acceptance Model. The complexity construct is replaced by the construct *Perceived ease of use*, as used in the Technology Acceptance Model. The decomposed model used by Lin (2008: 437) consists of the following constructs: *Perceived usefulness* , *Perceived ease of use*, compatibility, attitude, subjective norm, perceived behavioural control, interpersonal influence, external influences, self-efficacy and facilitating conditions.

The decomposed model suggested by Lin (2008: 436) forms the basis for the proposed model. The main user acceptance theories are discussed, namely: the Theory of Reasoned Action, the Technology Acceptance Model, the Motivational Model, the Theory of Planned Behaviour, a model combining the Technology Acceptance Model and the Theory of Planned Behaviour, the Model of Personal Computer Utilisation, the innovation diffusion theory, and the Social Cognitive Theory. The purpose of this analysis of the decomposed model proposed by Lin (2008: 436) and the other user acceptance models is to exclude the constructs that are not relevant for investigating social network usage. The resulting comprehensive, integrated and decomposed model of the Theory of Planned Behaviour is used in the present study.

5.3.1 The original Theory of Planned Behaviour

5.3.1.1 Perceived ease of use and perceived usefulness as decomposed attitude constructs

The Theory of Planned Behaviour consists of three dimensions: attitude towards a specific behaviour, subjective norm and the additional construct, perceived behavioural control. Attitude towards a specific behaviour is determined by the individual's beliefs regarding the consequences that his/her behaviour might have, as well as the affective evaluation of the probability of such consequences occurring for the given behaviour (Ajzen & Fishbein, 1973: 216). The Technology Acceptance Model decomposes attitude into *Perceived ease of use* and *Perceived usefulness.* This decomposition of attitude proved to be a good predictor of user acceptance of new technology and, therefore, is used as the measurement of attitude for this study (Sommer, 2011: 91).

The Motivational Model identifies the construct external motivation or external regulation, when an action is performed in order to realise a positive end or to avoid a negative one (which is similar to *Perceived usefulness)*.

The Model of Personal Computer Utilisation identifies three dimensions of perceived consequences, in a technological context, namely complexity, job fit and long-term consequences of use. Complexity refers to the degree of difficulty of understanding and using technology and has an inverse relation to adoption, meaning the more complex a new technology is perceived to be by the users; the least likely users are to adopt it. Complexity is the opposite of the *Perceived ease of use* construct of the Technology Acceptance Model. Job fit refers to the perception by the user that the technology will enhance their job performance. Job fit and long-term consequences are similar to *Perceived usefulness* in the Technology Acceptance Model (Thompson *et al.*, 1991: 128).

The Social Cognitive Theory categorises outcome expectations in terms of performance and personal expectations (which is similar to *Perceived usefulness)* and in terms of the construct, affect (which is similar to *Perceived ease of use*).

The Innovation Diffusion Theory also includes the construct *Perceived ease of use* and describes it as the degree to which an innovation is perceived as being difficult to use (Moore & Benbasat, 1991: 195), which is very similar to the way in which this construct is used in the current study. In addition, the Innovation Diffusion Theory includes the constructs image, visibility, compatibility and results demonstrability, which are similar in nature to the *Perceived ease of use* construct as used in the Theory of Planned Behaviour, and, therefore, these additional innovation diffusion constructs are not included as separate constructs in the current model.

5.3.1.2 Susceptibility to norm influence

Susceptibility to norm influence, in the original Theory of Planned Behaviour, is operationalised by Fishbein and Ajzen (1975: 302) as the belief an individual has that an individual or group whom that individual regard as important, believes that the individual should perform a specific behaviour.

The Model of Personal Computer Utilisation identifies the construct norms, which is consistent with the *Susceptibility to norm influence* construct and is operationalised as the self-instruction of an individual to perform a certain action only when considered to be appropriate by members of a group and is directly influenced by strong affective components (Thompson *et al.*, 1991: 126).

Ten Kate, Haverkamp, Mahmood and Feldberg (2010: 21) describe that subjective norm is an important determinant of intention, and suggest that behaviour is learned from observing and emulating the behaviour of reference group members, whom an individual regards as worthy of emulation. Batra, Homer and Kahle (2001: 116) emphasise the influence of reference groups on individual behaviour and suggest that reference groups provide “standards” against which the individual evaluates and compares his/her own behaviour in specific circumstances. Thus, they suggest that *Susceptibility to norm influence* could have an effect on the intention to adopt new technologies.

5.3.1.3 Internet self-efficacy

Perceived control, as operationalised in the decomposed Theory of Planned Behaviour, refers to the presence or absence of the necessary information, skills,

opportunities, barriers and obstacles that either assist or hinder an individual in realising a desired outcome (Fishbein & Ajzen, 2011: 155). Perceived behavioural control is decomposed into self-efficacy and facilitating conditions (Taylor & Todd, 1995a: 142). Seeing that the context of the current study is a computer-mediated environment, self-efficacy in this context refers to computer self-efficacy, which is operationalised as an individual's belief regarding their own abilities to use computer technology (Venkatesh & Davis, 1996: 452). Daugherty, Eastin and Gangadharbatla (2005: 71) define *Internet self-efficacy* as the confidence an individual has to understand, navigate, and evaluate content online. Gangadharbatla (2008: 7) suggests that the greater the ease with which individuals can navigate Facebook, the greater the likelihood that they will join, use and participate in user-generated content.

Facilitating conditions is operationalised by Triandis (1979: 205) as a collection of environmental or situational factors that are objectively judged to contribute to the ease of reaching a desired outcome. One of the qualifying conditions for participants of the current study was access to Facebook and, therefore, facilitating conditions were controlled for and excluded from the final model.

The Innovation Diffusion Theory contains a similar construct called voluntariness of use, which is the perception that a particular behaviour is voluntary, or of free will (Moore & Benbasat, 1991: 195).

The Social Cognitive Theory contains the constructs self-efficacy and anxiety, where self-efficacy refers to the belief in one's ability to combine individual motivation and cognitive ability to realise a particular situational outcome (Wood & Bandura, 1989: 410). Anxiety refers to the negative affective emotion or fear an individual experiences when he/she has to use computer technology. The construct anxiety, which is related to *Internet self-efficacy*, was empirically shown to be a weak predictor of new technology usage and was, therefore, excluded from the current study (Barbeite & Weiss, 2004: 3).

5.3.2 Additional constructs derived from the Motivational Model

The Motivational Model has, as its core, the constructs extrinsic motivation, intrinsic motivation and amotivation. Intrinsic motivation consists of three dimensions: firstly,

an individual engages in an activity because of the sense of accomplishment felt as a result of, “learning, exploring, and understanding new things"; secondly, an individual engages in an activity, "trying to surpass oneself, creating, or accomplishing something" and lastly, an individual engages in an activity to purely to experience stimulation (Barbeite & Weiss, 2004: 3).

The first type of external motivation is external regulation, when an action is performed in order to attain a positive end or to avoid a negative one. External regulation forms the non-self-determined end of extrinsic motivation. The second type of external motivation is introjected regulation, when an individual takes a stimulus from the environment and internalises it. This then forms the reason for behaving in a certain way in the future in order to avoid feeling shame and internal pressure. The third type of external motivation is identified regulation, where the reason for engaging in an activity is internalised as being valuable. Behaviour is seen to be regulated by identification with an activity perceived as valuable. The final type of external motivation identified is integrated regulation, when the choice to engage in a specific activity is consistent with the individual’s self-structures. Integrated regulation is considered the most self-determined type of external motivation (Vallerand & Ratelle, 2002: 43).

From the preceding dimensions of the Motivational Model, the following additional constructs were included in the final model of this study.

5.3.2.1 Perceived enjoyment

The Motivational Model theorises that an individual engages in a specific behaviour because of the pleasurable sensations experienced as a result of engaging in that behaviour. In addition, the second hierarchical level of the Motivational Model is the contextual level or life domain of an individual and refers to the pleasurable associations made to specific contexts, such as education, leisure and interpersonal relationships (Vallerand, 2000: 313).

The Model of Personal Computer Utilisation includes the construct affect which is associated with “the feelings of joy, elation, or pleasure, or depression, disgust, displeasure, or hate” an individual associates with a specific behaviour (Triandis,

1979: 211) These sensations of pleasure represent an important antecedent determining the *Intention to use* new technology, such as social networks.

5.3.2.2 Need for cognition

As mentioned above, the Motivational Model posits that a person is motivated to behave in a specific manner because of the resulting pleasurable sensations derived from that behaviour. One such specific, pleasurable behaviour is “learning, exploring, and understanding new things" and also from the pleasurable outcomes experience when an individual “surpass oneself, creating, or accomplishing something" (Vallerand & Ratelle, 2002: 43). Cacioppo *et al.* (1984: 306) refer to this pleasurable behaviour as the *Need for cognition* and link it to information-seeking behaviour and operationalise it as the propensity of an individual to stimulate the cognitive and derive pleasure from such behaviour.

Gangadharbatla (2008: 8) suggests that people who are intrinsically interested in analysing and processing information and user-generated content are more likely to form attitudes regarding a particular site by means of cognition, in contrast to those who are more attracted to the design and aesthetic features rather than cognitive aspects.

The final construct of the Motivational Model suggests that motivation produces psychological outcomes, consisting of four dimensions. The first of these motivational outcomes is cognitive in nature (Vallerand, 2000: 313) and is, therefore, similar to the *Need for cognition*. Fishbein and Ajzen (2005: 179) include the *Need for cognition* in the attitude construct of the Theory of Planned Behaviour; therefore, the *Need for cognition* as motivator to use technology, is included in the final model.

5.3.2.3 Collective self-esteem

According to Gangadharbatla (2008: 8), the constructs of *Collective self-esteem* and *Self-esteem* are similar in nature, considering that individuals seek to reach and maintain high levels of both *Self-esteem* and *Collective self-esteem* and also that the way in which collective-self-esteem is constructed in a group is similar to the way in which an individual would construct individual *Self-esteem*.

The construct, social factor, which forms part of the Model of Personal Computer Utilisation, is operationalised as the collection of cultural norms, cultural conventions, cultural rituals and cultural values that an individual subscribes to and which directly influence behaviour in a specific situation (Thompson *et al.*, 1991: 191). This Model of Personal Computer Utilisation construct is similar in nature to *Collective self-esteem* (which is also referred to as social identity in psychology literature) and is operationalised as the aspect of self-concept that is derived from being a member of a social group and includes the value and importance that a person assigns to being a member of that specific social group (Tajfel & Bruner, 1981: 255).

The social nature of Facebook, as well as the utility of group formation that is prevalent on the Facebook platform makes it important to investigate *Collective self-esteem* as a construct to understand the user acceptance of social media, including Facebook.

5.3.2.4 Need to belong

Pelling and White (2009: 755) suggest that one of the most important human motivations to behave in a specific manner stems from the need to have a relationship with others, which creates a related feeling of belongingness. It is this feeling of belongingness which is a major motivator for social network usage and as such, needs to be studied empirically.

Ajzen (1985: 12) operationalises subjective norms, one of the basic constructs of the Theory of Planned Behaviour, as the extent to which those whom an individual regards as important, agree or disagree with a specific behaviour, which directly influences the intention to perform that action or not. This definition of Ajzen (1985: 12) closely resembles the construct of belongingness or the *Need to belong*, which was described earlier as the resultant positive feeling experienced from being in a relationship with others (Baumeister & Leary, 1995: 505).

Nadkarni and Hofmann (2012: 243) suggest that this positive feeling of belongingness forms a crucial part of well-being, self-concept and, therefore, self-worth, and as such is actively pursued by most people. Gangadharbatla (2008: 8) posits that the construct *Need to belong* can be understood in terms of the fundamental interpersonal-relationship orientation, which suggests three basic needs

as basis for group-seeking behaviour, including the following: inclusion, which is the need to form part of a group of friends; affection, which is the need to love and be loved, and control, which is the need to influence one's own behaviour or the need to influence the behaviour of others. Social network sites, such as Facebook, have the ability to satisfy all three these needs and, therefore, should represent a significant motivator to join and participate in social network sites; therefore, the construct, *Need to belong*, is included in the current model.

The constructs *Self-esteem*, *Collective self-esteem* and *Need to belong* are related constructs and need to be investigated separately in the socially driven social media context.

5.3.2.5 Risk

The unique nature of online activity by means of computer-mediated environments and the absence of face-to-face human contact mean there is an inherent perception of possible loss and an inherent online risk. In a social media context, this perception of loss, or then perception of risk, is exacerbated by the negative publicity that social media has received in traditional media (Roy, 2009: 879)

Risk refers to the individually perceived probability of loss associated with a specific behaviour. The greater the probability of loss associated with a specific behaviour, the higher the perceived risk (Stone & Winter, 1987: 12). Risk, and the related construct trust, both play a role in the Theory of Planned Behaviour constructs of *Perceived ease of use*, *Perceived usefulness*, *Susceptibility to norm influence* and perceived behaviour control and could negatively affect user intention to adopt new technology.

Featherman and Pavlou (2003: 454) identified different types of losses that can be suffered in an Internet context. They concurred that the nature of the Internet leads to new dimensions of loss to be identified and found that *Privacy risk* should be added to the list of dimensions for a computer-mediated environment. They further believe that the physical loss dimension should be excluded, as the virtual context does not hold any threat to human life. Based on this risk classification, the six risk dimensions in the Internet adoption context that have been identified and explored in

this study are: economic risk (financial), functional risk, time risk, *Psychological risk*, *Social risk*, and *Privacy risk*.

Financial risk stems from paying more for a product than what was necessary or not get sufficient value for the money spent. Consumers generally address this problem by 'shopping around' for the most satisfactory price. Functional risk (sometimes referred to as performance or quality risk) is based on the belief that a product will not perform as well as expected or will not provide the desired benefits.

Psychological risk arises from the likelihood that a purchase will not reflect one's personality or self-image. *Social risk* is concerned with an individual's ego and the effect that a purchase will have on the opinions of reference groups. In the cases of *social* and *Psychological risk*, a poor purchase choice can result in harm to a buyer's social and self-image. Branding and positioning of products are closely associated with these two types of risk. Time-loss risk refers to the possibility that a purchase will take too long to be concluded or waste too much time.

Privacy risk is the concern for the theft of private information (loss of control over possible intrusion), or simply loss of anonymity and control over personal information (loss of control over disclosure), such as when personal information is used without permission (Featherman & Pavlou, 2003: 454)

Social networks, such as Facebook, is a free platform, without direct e-commerce channels and, therefore, financial risk is not included in the final model. Functional risk forms part of the model as part of *Perceived usefulness* and *Perceived ease of use* and is, therefore, excluded from the current model. Time-loss is also not included in the final model as there is no direct possibility of loss of time when using social networks such as Facebook. The risk dimensions that have been retained in the final model are *Privacy risk*, *Psychological risk* and *Social risk*.

5.3.2.6 Trust

Pavlou and Gefen (2004: 45) posit that the constructs risk and trust are subject to the perception of an individual and, therefore, differs among individuals. Empirical research has shown that the presence of trust reduces the perception of probable loss associated with a specific behaviour. Trust and risk, however, are complicated

constructs with no agreed-upon definition and the interrelationship between these two constructs is complex. Mayer, Davis and Schoorman (1995: 711) describe the complex relationship as follows: “it is unclear whether risk is an antecedent to trust, is trust, or is an outcome of trust”. It is, however, generally agreed that risk and trust are closely related and, therefore, no model could be regarded as complete if it does not also contain the trust construct.

In an e-commerce context, trust is described as the willingness of a person to make himself/herself vulnerable to possible loss by depending on another individual or party to behave or refrain from behaving in a specific way that would cause some form of loss while shopping online (Pavlou & Gefen, 2004: 45). Trust relies on the online business to honour an agreement, which has been conducted virtually and deliver the goods and services as promised.

The global level or general personality of the individual in a Motivational Model refers to the propensity to engage in behaviour with an intrinsic or extrinsic orientation (Vallerand, 2000: 313). Furthermore, recent studies have suggested the inclusion of trust as part of the Technology Acceptance Model in order to measure consumer acceptance of Internet technologies. It has also been suggested that the construct trust is of particular importance in virtual communities, where there is a lack of formal rules, and members have to rely on others to behave in a responsible matter, referred to as trust (Lin, 2006: 542). It is, therefore, relevant to include trust in the current study. In an online community context, three trust dimensions have been identified namely *Interpersonal trust*, system trust and *Dispositional trust*. (Chi *et al.*, 2009: 215).

McKnight, Cummings and Chervany (1998: 477) operationalise *Dispositional trust* as an individual’s pervasive willingness to depend on others regardless of the prevailing situation.

Interpersonal trust is operationalised by McKnight *et al.* (1998: 9) as both a situational-specific and individually-specific attribute. The individual generally believes that others would not intentionally cause him/her loss or harm. Human beings generally depend on the goodwill of others when conducting financial transactions online.

Both *Dispositional trust* and *Interpersonal trust* are the general trust that a social network user has in the other members of the social network and is described by McKnight *et al.* (1998: 13) as a pervasive attribute of an individual to trust in others generally and also to trust others across a variety of situations.

Systems trust is the trust or reliance the social network users have in the social network as hypermedia platform. Systems trust is similar to the aspects inherent to *Perceived usefulness* and *Perceived ease of use* of the technology and as a result, only the constructs *Dispositional trust* and *Interpersonal trust* are incorporated in the present model.

5.3.2.7 Behavioural intention

The Motivational Model suggests that motivation produces psychological outcomes, with motivational outcomes of intention leading to behaviour. It is this intention to behave in a certain manner that forms the dependent variable of the current study. (Vallerand, 2000: 313).

5.4 USERS VERSUS NON-USERS OF SOCIAL MEDIA

Moore and Benbasat (1991: 208) suggest that, based on the innovation diffusion theory, adopters of new technology have a more positive perception of new technology and, therefore, a more positive attitude towards the new technology. From this follows that users of social networks such as Facebook should generally have a more positive attitude towards social networks than non-users.

Levin *et al.* (2008: 66) assert that non-users express reservations about sharing any form of personal information online by making statements such as the following: “In terms of putting information on there, I would never in a million years put information about myself or my family on any type of public Internet site”, and also: “The first thing that frightens me terribly is the fact that people who are using it are uneducated as to what happens to the information, particularly the younger crowd”.

Based on the innovation diffusion theory, non-users of new technology are regarded as either laggards who eventually get to use the technology or as defectors who no longer use the technology at all (Selwyn, 2003: 105). Greger (2010: 43) believes that

non-users are not necessarily laggards who eventually become users and they have to be considered a permanent phenomenon. Also, those not using information technology (or parts thereof) are still to be considered part of the information society. Greger (2010: 43) further suggests that non-users can be divided into involuntary non-users or 'have nots' (individuals who do not have access to technology due to physical, costs or competency constraints), and voluntary non-users or 'want nots' (individuals who have access to technology but choose not to use it). In other words, "non-use is not a reason for failure, but is a form of use in itself" (Greger, 2010: 54).

Hargittai (2007: 278) also poses the question as to whether there are systematic differences in the characteristics of users and non-users, specifically in the context of social network sites, and points out that empirical studies that focus on users only are excluding an important demographic, namely non-users. The authors recommend that future empirical research regarding social network use should also include non-users.

It is against this background that the decomposed Theory of Planned Behaviour will also be applied to non-users of Facebook in order to assess if there are systematic differences between the two groups in terms of their motives to use or not to use this platform.

5.5 GRATIFICATIONS DERIVED FROM USING SOCIAL NETWORK SITES

As mentioned in Chapter 4, the proposed comprehensive decomposed Theory of Planned Behaviour model identifies three distinctive dimensions that influence user acceptance of new technology and consist of the dispositional factors of individuals, environmental influences and factors inherent and unique to the innovation itself. These dimensions are operationalised for the purpose of this study, as antecedents or motivators that influence intention, which in turn leads to behaviour. In order to gain a comprehensive understanding of the reasons for social network use, it is also important to consider the outcomes, benefits, and gratifications or needs and wants that are being satisfied by the use of social network sites.

In a study on the use and gratification of the social networking site, Facebook, Joinson (2008:1032) identifies seven distinct characteristics, namely:

- social connection refers to keeping in touch with others;
- shared identities refers to the joining of groups, organisation of events and meeting 'like-minded people';
- content refers to the applications and quizzes used on Facebook;
- social investigation consists of searching for others and browsing the profile of others;
- social network surfing refers to the ability to link to other people's profiles who are not 'friends' with the 'surfer'; and
- status updates relate to the news feeds and status updates, within Facebook.

Hsu (2007: 598) adds a number of gratifications to those identified by Joinson (2008: 1032) to derive the following set of gratifications that will be used in the current study: *Information-seeking, Media drenching, Diversion, Performance, Narcissism, Relationship maintenance, Aesthetic experience, Virtual community* and *Reference*. These constructs are operationalised as follows:

- *Information-seeking* are aspects such as learning about local community events, obtaining useful information, finding bargains, and staying abreast of new technology.

- *Media drenching* indicates users' increased usage of online photo albums.

- *Diversion* refers to the use of social network sites for any form of entertainment.

- *Performance* refers to users' discussion of particular persons or things. Users then present their identity for fans/followers and also show their attachment and knowledge.

- *Narcissism* points to users' desire for increased visibility and knowledge as a basis for performance and their desire to show their special identities.

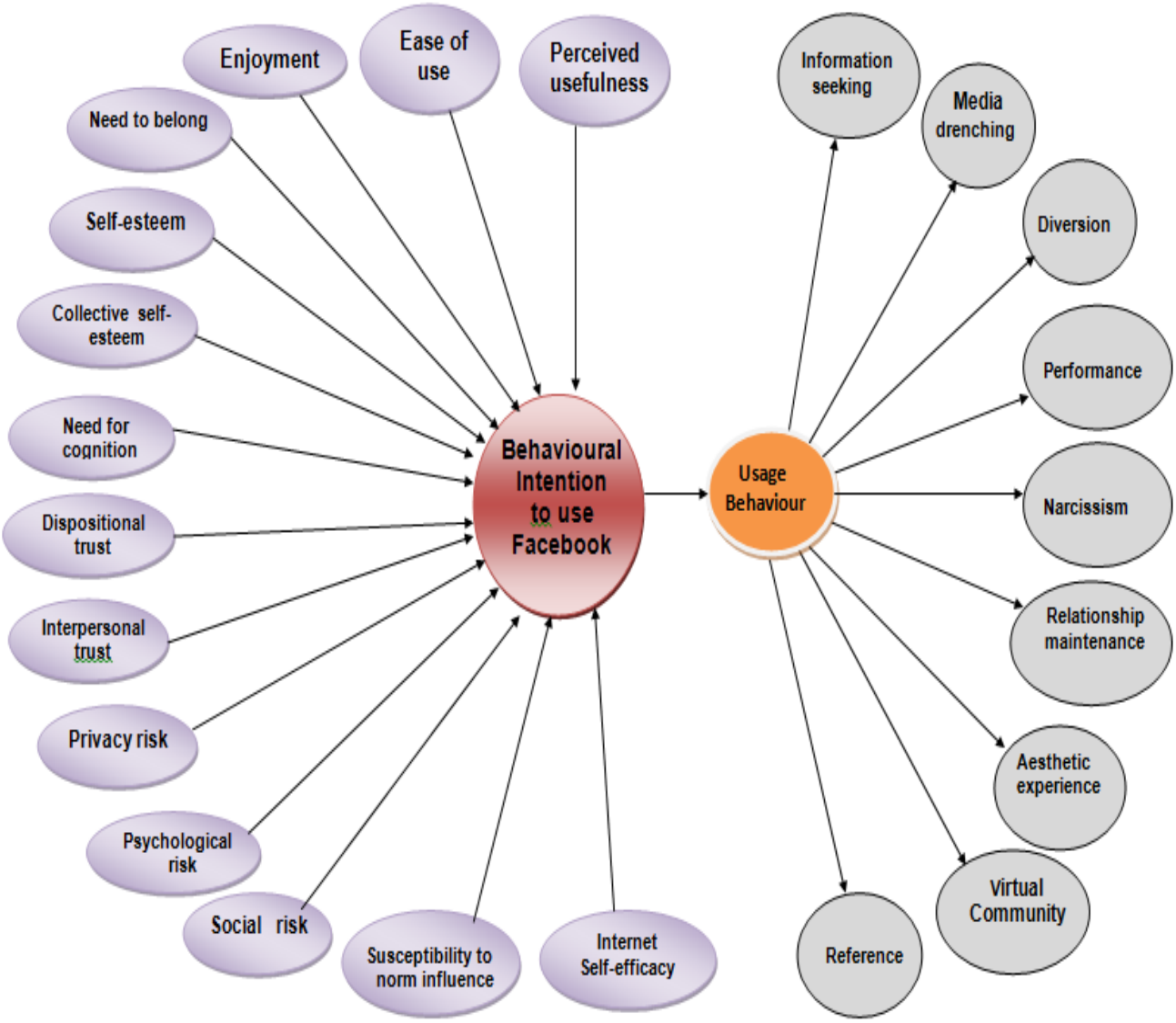
- *Relationship* maintenance focuses on maintaining bonds with existing acquaintances, rather than forming new friends by using the Internet.

- *Aesthetic experience* refers to affective-related gratification.
- *Virtual community* refers to the process whereby users try to establish a new social life online, and
- *Reference* refers to the accessing of user-generated content as reference, such as reviews of restaurants or other products (Hsu, 2007:598).

The comprehensive, decomposed model of the Theory of Planned Behaviour consists of both the antecedents and motivators that influence intention to behave in a specific manner, as well as the outcomes, benefits and gratifications of social network usage. Figure 5.1 illustrates the decomposed model of the Theory of Planned Behaviour, which is followed by the operationalisation of the antecedents used in this research.

FIGURE 5.1

THE DECOMPOSED MODEL OF THE THEORY OF PLANNED BEHAVIOUR



5.6 OPERATIONALISATION OF VARIABLES

The antecedents of the expanded decomposed Theory of Planned Behaviour (which are the independent variables for the current study) include: *Perceived usefulness, Perceived ease of use*, *Perceived enjoyment*, *Need to belong*, *Self-esteem*, *Collective self-esteem*, the *Need for cognition*, *Dispositional trust*, *Interpersonal trust*, *Privacy risk*, *Psychological risk* and *Social risk*. These constructs are operationalised next.

5.6.1 Perceived usefulness

Perceived usefulness is the perception of the individual regarding the extent to which a particular system is able to assist him/her in increasing his/her vocational productivity (Davis, 1989: 320).

5.6.2 Perceived ease of use

Perceived ease of use refers to the perception of the individual regarding the amount of mental or physical effort that is needed to learn or use a new technology (Davis, 1989: 320).

5.6.3 Perceived enjoyment

Davis *et al.* (1992: 112) describe *Perceived enjoyment* as a type of intrinsic motivation and *Perceived usefulness* as a type of extrinsic motivation. *Perceived enjoyment* is the extent to which the activity of using a computer system is perceived to be personally enjoyable in its own right, aside from the instrumental value of the technology. Shin (2007: 473) found that *Perceived enjoyment* as a hedonistic purpose strongly influenced online use for entertainment purposes. It can be hypothesised that people use the hedonistic social network sites to satisfy their entertainment needs.

5.6.4 Need to belong

The construct of belongingness or the *Need to belong* is the pervasive human driving force to form and maintain a minimum quantity of lasting, positive and significant interpersonal relationships with others (Baumeister & Leary, 1995: 499).

5.6.5 Collective self-esteem

Collective self-esteem is that part of self-concept that includes the emotional significance, that is derived from the knowledge that one is a member of a social group (Tajfel & Bruner, 1981: 244).

5.6.6 Need for cognition

The *Need for cognition* refers to the motivation to behave in a specific manner as a result of pleasurable sensations derived from engaging in cognitive activities Cacioppo *et al.* (1984: 306). Varying levels of this intrinsic characteristic can predict how people deal with tasks and social information Cacioppo *et al.* (1984: 306).

5.6.7 Dispositional trust

The propensity to trust or *Dispositional trust* is a pervasive willingness to depend on others and includes various situations and individuals (McKnight & Chervany, 2001: 45). Simply put, *Dispositional trust* is the general attitude towards trust as part of one's psychosocial composition.

5.6.8 Interpersonal trust

Interpersonal trust, in the context of this study, refers to a general trust that a social network user has in the other members of the social network, that those others would not intentionally cause them loss or harm.

5.6.9 Privacy risk

Privacy risk is the concern for the theft of private information (loss of control over intrusion), or simply the loss of anonymity and control over personal information (loss

of control over disclosure) or when private information is used without permission (Featherman & Pavlou, 2003: 455; Cases, 2002: 379). This unauthorised use includes: the sharing or selling of personal information; tracking of consumer activities online; the placement of cookies on browsers, being contacted without consent and general invasion of privacy concerns (Miyazaki & Fernandez, 2001: 28).

5.6.10 Psychological risk

Psychological risk reflects disappointment, a sense of foolishness (Roselius, 1971: 56) embarrassment or loss of *Self-esteem* (Mitchell & Greatorex, 1993: 182) resulting from friends or family knowing a purchased product or service has failed (Ueltschy *et al.*, 2007: 413).

5.6.11 Social risk

Social risk refers to the probability (Kaplan, Szybillo & Jacoby, 1974: 287) that a product will negatively affect the opinion and reaction other people hold of the person (Pires, Stanton & Eckford, 2004: 120). The perception of an individual regarding the impression others have of him/her and is represented by the individual's ego (Cases, 2002: 379), which is defined as an internal state of self-image control (Schiffman, 1972: 107). *Social risk* varies with such factors as a product's social importance and its social conspicuousness (Perry & Hamm, 1969: 351).Susceptibility to norm influence

5.6.12 Susceptibility to norm influence

Susceptibility to norm influence refers to the susceptibility of decision makers to the influence of reference groups, which is used as a standard of comparison for self-appraisal or as a source of personal norms and attitudes.

5.6.13 Internet Self-efficacy

Internet self-efficacy is the confidence a person has in his/her ability to "understand, navigate, and evaluate content online" (Gangadharbatla, 2008: 7).

In addition to the antecedents and motivators or gratifications sought from social

network use, specific dispositional characteristics are also used to investigate systematic differences in social network usage.

5.7 THE EFFECT OF GENDER AND AGE ON THE EXTENT OF FACEBOOK USE AND NUMBER OF FACEBOOK FRIENDS

A number of authors have explored the relationship between the dispositional social network user-characteristics and their social network behaviour. Gross and Acquisti (2005: 73) investigated the extent of information shared on the social network site, Facebook. The results indicated a significant difference between genders regarding the disclosure of personal information. Female members were less likely to disclose their sexual orientation, personal address and mobile phone number than male members. Taraszow *et al.* (2010: 87) concluded that a comparison of the differences between males and females is rare, but important to investigate, to allow customisation of potential market communication for those using the social network Facebook as a marketing communication channel. Gülnar, Balcı and Çakır (2010: 161) who found gender differences to exist with regard to self-expression, information-seeking and relationship maintenance. Tufekci (2008: 544) posits that gender is a strong predictor of the number of friends and also of the extent of social network site usage. Tong *et al.* (2008: 531) also examined aspects of the number of Facebook friends. The study specifically investigated the relationship between the number of Facebook friends and ratings of attractiveness and extroversion.

In addition to gender differences and the inherent psychological dimensions contained in the number of Facebook friends, age appear to have an inverse relationship with the use of technology (Madden & Savage, 2000: 182).

Joinson (2008: 1035) postulates that age, gender and occupational status have an impact on the purpose of social connectivity. For example, perpetual contacting of friends motivates younger (and female) users more than older (and male) users.

In a study by Cha (2010), it was suggested that user acceptance of new media could be measured using the frequency (i.e., how often people use social networking sites) of new media usage and the extent of new media usage (i.e., how many hours people spent on social networking sites per week). Kraut, Kiesler, Boneva,

Cummings, Helgeson and Crawford (2002: 49) found that user acceptance can be measured in different ways, including hours of Internet use.

In addition to the proposed decomposed model of the Theory of Planned Behaviour model shown in Figure 5.1, the relationship between user characteristics and specific social network usage aspects is also investigated. More specifically, frequency and the extent of Facebook usage and the number of Facebook friends are compared with the demographic dimensions of gender and age groups in the current study.

The above represent the constructs to be examined in this study and their hypothesised relationships are explored.

As the empirical study was limited to only one social network site, namely Facebook, reference will from here onwards, be made to Facebook and to social media networks interchangeably.

5.8 HYPOTHESES

Based on the review of the extant literature on the usage of technologies, a decomposed Theory of Planned Behaviour forms the basis for investigating the relationship between the antecedents of technology usage and the *Intention to use* technology. These antecedents represent the independent variables and the *Continued intention to use* or the *Intention to use* technology is the dependent variable of the decomposed Theory of Planned Behaviour.

The expanded Theory of Planned Behaviour model contains a large number of factors and, therefore, became too complex to be meaningfully analysed in a single structural equation model analysis. A number of authors including Ardichvili (2008: 550) and Ridings, Gefen and Arinze (2006: 332) therefore divides the determinants of user acceptance into two categories, namely motivators and barriers affecting social network users' *Continued intention to use* social network sites. The factors comprising the expanded Theory of Planned Behaviour model (mentioned earlier) for both the users and non-users of Facebook, was, therefore, further divided into motivators for and barriers to using Facebook.

Based on this additional classification, four distinct groups of factors are identified,

namely: barriers to Facebook use among Facebook users (referred to as the Facebook users barriers model); motivators of Facebook use among users of Facebook (referred to as the Facebook users motivators model); barriers to Facebook use among non-users of Facebook (referred to as the Facebook non-users barriers model); and motivators of Facebook use among non-users of Facebook (referred to as the Facebook non-users motivators model). In order to gain a complete understanding of social network usage, the relationship between the antecedents (consisting of both barriers and motivators to use) and the *Intention to use* technology is investigated among both users and non-users of Facebook. These relationships between antecedents and *Continued intention to use* or *Intention to use* social networks are hypothesised as follows:

5.8.1 Barriers to continued social network use for users of social media

H1: *Dispositional trust* positively influences the *Continued intention to use* social media for users of social media

H2: *Internet self-efficacy* positively influences the *Continued intention to use* social media for users of social media

H3: *Privacy risk* negatively influences the *Continued intention to use* social media for users of social media

H4: *Psychological risk* negatively influences the *Continued intention to use* social media for users of social media

5.8.2 Motivators of continued social network use for users of social media

H5: Perceived *enjoyment* positively influences the *Continued intention to use* social media for users of social media

H6: *Perceived ease of use* positively influences the *Continued intention to use* social media for users of social media

H7: The *Need for cognition* positively influences the *Continued intention to use* social media for users of social media

H8: *Susceptibility to norm influence* positively influences the *Continued intention to use* social media for users of social media

H9: *Perceived usefulness* positively influences the *Continued intention to use* social media for users of social media

5.8.3 Barriers to social network use for non-users of social media

H10: *Dispositional trust* positively influences the *Intention to use* social media for non-users of social media

H11: *Internet self-efficacy* positively influences the *Intention to use* social media for non-users of social media

H12: *Privacy risk* negatively influences the *Intention to use* social media for non-users of social media

H13: *Psychological risk* negatively influences the *Intention to use* social media for non-users of social media

H14: Perceived *enjoyment* positively influences the *Intention to use* social media for non-users of social media

5.8.4 Motivators of social network use for non-users of social media

H15: *Perceived ease of use* positively influences the *Intention to use* social media for non-users of social media

H16: *Need for cognition* positively influences the *Intention to use* social media for non-users of social media

H17: *Susceptibility to norm influence* positively influences the *Intention to use* social media for non-users of social media

H18: *Perceived usefulness* positively influences the *Intention to use* social media for non-users of social media

5.9 SUMMARY

This chapter analysed the main user technology theories including the Theory of Reasoned Action, the Technology Acceptance Model, the Motivational Model, the Theory of Planned Behaviour, a model combining the Technology Acceptance Model and the Theory of Planned Behaviour, the Model of Personal Computer Utilisation, the innovation diffusion theory, and the Social Cognitive Theory.

The key constructs of the acceptance models were compared in order to identify the constructs that are unique in nature, in order to include these in the comprehensive decomposed Theory of Planned Behaviour used in this study. These constructs can be divided into three broad categories, namely demographic constructs, antecedents to technology usage and gratifications sought from the use of social networks.

Chapter 6

RESEARCH DESIGN AND METHODOLOGY

6.1 INTRODUCTION

According to Kothari (2004: 1), research is an original contribution to knowledge by means of a systematic method consisting of: defining the problem, formulating hypotheses, collecting data, analysing the facts and reaching conclusions (either in the form of solutions towards a problem or in a generalised theoretical formulation).

In order to investigate the antecedents and outcomes or gratifications sought from social media usage, the constructs identified in Chapter 5 were used to develop an appropriate research design for this study. The purpose of this chapter is, therefore, to describe the systematic research methodology that was followed to investigate the relationship between the constructs of the decomposed Theory of Planned Behaviour and the usage of a social network.

Firstly, the research methodology is explained in more detail, followed by a description of the target population, and a discussion of the sampling frame, sampling method and sampling size. The methods used for collecting the data are discussed next and then the operationalisation of the constructs under investigation is addressed. Finally, the methods used for analysing the data are discussed.

6.2 RESEARCH DESIGN

A research design is a framework or blueprint for conducting the research project or a ‘master plan’ that provides specific details regarding the research design and methodology (Malhotra & Birks, 2006: 15). Collis (2003: 3) suggests that due to the fact that research has different meanings in different contexts, it is difficult to construct a general definition that is applicable to all situations. There is general consensus, however, that research is a process of enquiry and investigation that is systematic and methodical and generates knowledge.

Saunders, Lewis and Thornhill (2009: 5) identify a number of common characteristics of research, including: the data are collected systematically, the data are interpreted systematically, and it has a clear purpose to discover new information.

Based on these descriptions, definitions and characteristics of research, the current research can be described as a deductive, quantitative research study that had descriptive and relational research as its purpose and compared the behaviour of two natural groups, namely users and non-users of the social network site, Facebook, by means of a survey research design.

Most research project populations, including the population of this study, were too large to include all elements of that population in the study. This situation necessitated the selection of a sample from the population. Zikmund and Babin (2009: 304) identify seven stages that have to be completed sequentially in order to obtain empirical data from a sample. The seven stages consist of the following: defining the target population; selecting the sample frame; determining if a probability or non-probably sample method is chosen; planning the procedure for selecting sampling units; determining the sample size; selecting the actual sampling units, and conducting the fieldwork.

6.3 TARGET POPULATION

The population of a research project is operationalised as the sum total of those factors that share a common characteristic that is important to be investigated, in order to address the research problem.

These ‘factors’ refer to people, organisations, objects or phenomena, which often have common characteristics and that are of interest to the researcher (Malhotra & Birks, 2006: 357). If all the elements in a population are included in a study, it is called census. If, however, it is not practically possible to collect data from the entire target population, it is necessary to select a sub-group of elements from the population, called a sample, to represent the population as a whole.

Factors influencing the choice whether to make use of a census or sample, include: (Malhotra & Birks, 2006: 357) size of the research budget, time availability,

population size, variance of element characteristics, cost of sampling errors, cost of non-sampling errors, nature of measurement and attention to individual cases. Of these factors, population size had the biggest effect on the decision that the current study would make use of a sample. Facebook consists of more than 1.3 billion registered users and, therefore, it was totally impractical to do a census of the defined population.

It is proposed by Shiu (2009: 450) that when a sample is used rather than a census in a research project, a target population should be defined rather than a population. A target population is the group of people or things that possesses the qualities under investigation and from which the data are extracted to address the research problem statement (Malhotra & Birks, 2006: 358).

The population for social network sites consists of all the users of all the different types of social network sites. Due to the complexity and scale involved in drawing a sample from all the different types of social network sites, it was decided to focus on only one social network site, namely Facebook. The decision to use Facebook was based on convenience (being the biggest social network site in South Africa) and also because it is the biggest single social network site in the world. The population of this study therefore, consisted of all English-speaking users and non-users of the social media website, Facebook.

6.4 SAMPLING FRAME

A sampling frame is operationalised as a collection of respondent details collated in a single document such as a list, which is used to select respondents to participate in a specific study (Malhotra & Birks, 2006: 359). Due to Facebook's privacy policy, a sampling frame in the form of a list of Facebook users could not be obtained and, per definition, a list of non-users of Facebook does not exist. In the absence of a sampling frame, a set of directions for identifying the target population is provided. Non-users are individuals who have access to the Internet, who have either registered as a Facebook user before, but have not used Facebook in the past six months or are individuals who have never registered as a Facebook user. In this

study, Facebook users are regarded as individuals who have used Facebook at least once in the past six months.

Based on these directions for identifying the target population, respondents were approached online by means of an advertisement placed on Facebook and Google, as well as by the administration of hard copy questionnaires in three major metropolitan areas, in order to account for regional differences. Google has a larger user base than the total number of registered Facebook users and, together with the advertisements placed on Facebook and the distribution of hard copy questionnaires in three major metropolitan cities in South Africa, these methods provided acceptable coverage for the identified target population (Facebook users and non-users in South Africa). Additional details of the online data collection methods are provided in the data collection section below.

6.5 SAMPLING METHOD

Often the most important decision regarding the sampling method is whether to use a non-probability or probability sample (Malhotra & Birks, 2006: 360). A probability sample is operationalised as the sample technique where all respondents in the sample have an equal non-zero change or probability of being selected to participate in a study and which relies on probability theory to estimate how closely the sample resembles the population parameter (Saunders *et al.*, 2009: 222).

Non-probability sampling (or non-random sampling) is defined as a sampling technique where respondents are chosen based on the judgement of the researchers or because respondents are convenient to use and the selection of respondents is not based on probability theory (Zikmund & Babin, 2009: 312).

Due to the enormous population size and the fact that a sampling frame was not available, the drawing of a probability sample was not possible. Therefore, a non-probability sample was drawn from the defined target population. A multi-method quantitative technique, consisting of a combination of self-selection sampling, quota sampling and snowball sampling, was used, considering that a combination of techniques would result in a more representative sample. In the absence of a sample frame, self-selection sampling was used to involve geographically diverse population

elements in the final sample. Quota sampling was used in order for the sample to have the same distribution of characteristics as the target population, thereby increasing the validity of the results. See Table 6.1 for a comparison of the age distribution and Table 6.2 for the gender distribution of the sample and that of the population. The tables compare the characteristics of the South African Facebook population with the Facebook users sample and the Facebook non-users sample. Snowball sampling was used in order to gain access to population elements that were under-represented, based on the population characteristics identified for use with the quota sampling procedure.

TABLE 6.1

AGE DISTRIBUTION OF THE SAMPLE

	South African Facebook users	Facebook users sample		Facebook non-users sample	
Age	**%**	**n**	**%**	**n**	**%**
15-25	47	156	51	125	37
26-35	25	74	24	75	22
36-45	15	44	14	79	24
46-55	7	17	6	32	10
56-65	5	13	4	15	4
65+	1	3	1	8	2
	100	307	100	334	100

Source: http://www.socialbakers.com/facebook-statistics/south-africa

TABLE 6.2

GENDER DISTRIBUTION OF THE SAMPLE

	South African Facebook users	Facebook users sample		Facebook non-users sample	
Age	%	n	%	n	%
Female	51	155	50.5	170	50.9
Male	49	152	49.5	164	49.1
	100	307	100	334	100%

Source: http://www.socialbakers.com/facebook-statistics/south-africa

The age distribution of the sample, as represented in Table 6.1, indicates that the ages of the users of the Facebook sample very closely resemble the age distribution of South African Facebook users. The age distribution of the non-users of Facebook sample shows a reasonable age distribution compared to South African Facebook

users. The non-user sample was under-represented in the 15-25 year old age group by 10% and over-represented in the 36-45 year old age group by 9%. This distribution would be consistent with what can be expected of non-users, considering that the highest percentage of Facebook users are between the ages of 15-25 and, therefore, a much smaller percentage of 15-25 year old Internet users are not using Facebook. The gender distribution of both the users of Facebook sample and the non-users of Facebook sample were basically identical to the age distribution of South African Facebook users. The age distribution and gender distribution of both the users of Facebook sample and the non-users of Facebook were regarded as a reasonable representation of both Facebook users and non-users of Facebook in South Africa.

6.6 SAMPLING SIZE

Five considerations affect the decision on the required sample size for structural equation modelling (Hair, Black, Babin & Anderson, 2010:635), namely:

- Multivariate normality of the data is negatively related to sample size. The more data deviates from the assumption of multivariate normality, the greater the ratio of population elements to the number of parameters to be estimated needs to be. The generally accepted ratio, to minimise problems with the deviations from normality, is 15 population elements for each parameter to be estimated in the theoretical model.
- Estimation techniques vary according to the required number of population elements necessary to yield valid and stable results. The most common structural equation modelling estimation procedure, namely maximum likelihood estimation, requires as little as 50 population elements to provide stable results in ideal conditions. It is important to note that if the sample size becomes greater than 400, maximum likelihood estimation becomes very sensitive to almost any differences detected. Therefore, it is suggested that, subject to other considerations, samples in the range of 100-400 should be adequate.
- Missing data necessitates higher sample sizes, seeing that some approaches to remedy missing data problems reduce the sample size that can be used in

structural equation modelling.

- The standard deviation of the population affects sample size in that a large sample size is required as communalities become smaller.
- Based on these five factors to determine the required sample size, the following is suggested by (Hair *et al.*, 2010: 636) as minimum sample sizes:
    - Minimum sample size 100: models containing five constructs, each with more than three items and with high communalities (0.6 or higher).
    - Minimum sample size 150: models containing seven constructs, with no under- identified (fewer than three) constructs and modest commonalities (0.5).
    - Minimum sample size 300: models with seven, and/or multiple under-identified constructs and lower commonalities (below 0.45).
    - Minimum sample size 500: models with large number of constructs having fewer than three measured items and some with low commonalities.

Following the guidelines provided above, it was decided that a minimum of 300 population elements for each of the two sub-samples was sufficient, considering that there were no missing data and all latent variables were measured with more than three items.

6.7 DATA COLLECTION

According to Hair, Bush and Ortinau (2003: 255), there are two fundamental approaches to collect primary data, namely observation and asking questions. Structured questions are best suited for descriptive research designs where respondents are requested to express their attitudes towards certain phenomena. In marketing research, descriptive research designs have become synonymous with survey research methods used to collect quantitative primary data from large groups of people.

Using survey questionnaires generally yield several advantages including speed, low costs, flexibility and accuracy (Zikmund & Babin, 2009: 146). Self-administered questionnaires specifically offer two primary advantages: firstly, self-administered

questionnaires can be distributed to a large number of respondents in a short time, and secondly, self-administered questionnaires allow for anonymity, which increases the probability of honest responses (Mitchell & Jolley, 2013: 263).

A sampling frame was not available and, therefore, in order to make the sampling as representative as possible, while keeping cost and time limitations within acceptable limits, self-administered survey questionnaires were used. Both Internet-mediated questionnaires and delivery-and-collection methods were used to collect the data to address the research problems. Another reason for using both Internet-mediated and hard copy questionnaires was that it was previously found that a mixed-medium data collection method yielded more valid results, than a single medium data collection method on its own (De Leeuw, 2005: 235). To further enhance the sampling reach, fieldworkers were used to administer hardcopy questionnaires at two locations that were geographically widely dispersed.

The use of fieldworkers was appropriate, considering that they simply asked respondents to complete the self-administered questionnaire, without providing any additional instructions. Three fieldworkers were used to administer the questionnaires. Two fieldworkers were selected to administer the questionnaire in the two major South African cities of Johannesburg and Cape Town, while the third fieldworker administered the hard copy questionnaires in Port Elizabeth. The fieldworkers were chosen based on convenience and experience.

The fieldworkers were provided with training, which consisted of the following: firstly, they were provided with a written description of the qualifying question to be asked of the target population, in order to group them as either ‘user of Facebook’, or ‘non-users of Facebook’ (non-users referring to those individuals who have access to the Internet, but have not used Facebook in the previous six months, and Facebook users being individuals who have used Facebook at least once in the previous six months). Secondly, the fieldworkers were given a checklist consisting of the number of respondents that was needed in each identified quota sampling subset. Thirdly, the fieldworkers had to ensure that the respondents complete all questions. Lastly, they were instructed not to provide any additional information or instructions as to the completion of the questionnaire, thereby controlling for interviewer bias.

Weekly report-back sessions were held telephonically with the fieldworkers, to ensure that there were no operational problems and to identify quota subgroups that were not adequately targeted. Snowball sampling was another of the sampling methods used. The fieldworkers were requested to approach any potential respondent that satisfied the target population requirements to reach the proportional subset quotas. All questionnaire data were captured on a Microsoft Excel spread sheet.

The second method of data collection consisted of the administering of online questionnaires. Online questionnaires were chosen, because a large population can be reached quickly and cost effectively. A website was created (see Figure 6.1) using the free online web creation site called Wix.com, which contained information regarding the current research project and then provided two links to the actual self-administered online questionnaires that were hosted on the Nelson Mandela Metropolitan University (NMMU) servers. One link contained a description of Facebook users and the other link a description of Facebook non-users and the respondents were requested to click on the link of the description that described them most accurately. The URL of the website that was created was www.albertstudies.wix.com/socialnetworks.

In order to recruit possible respondents, an advertisement was placed on Facebook and the Internet search engine Google, requesting them to express their opinion as to why they were users or non-users of Facebook. The respondents then clicked on one of two hyperlinks, which performed the function of a qualifying question. If the respondents clicked on the hyperlink that stated they had used Facebook at least once in the previous six months, they were hyperlinked to the online, user questionnaire. If the respondents clicked on the button that stated they had not used Facebook in the previous six months, they were linked to the online non-user questionnaire. Additionally, several links were placed on Facebook groups and emails (containing the links to the Wix information site) were sent to the contact lists of consenting individuals who were willing to assist in snowballing the data collection. If respondents clicked on the link, they were directed to the Wix research project information website. All responses were recorded and summarised in a Microsoft Excel spread sheet that was exported and collated with the results of the hard copy questionnaire.

FIGURE 6.1

RESEARCH PROJECT INFORMATION WEBPAGE

The online questionnaire, hosted on the NMMU servers, was designed in such a way that the respondents received an error message preventing them from submitting an incomplete questionnaire, which indicated any information that was left out and which had to be completed first before the questionnaire could be submitted. This electronic control feature, together with the fieldworkers checking for completeness, reduced the number of incomplete questionnaires to a fraction of a percentage and no incomplete questionnaires were thus included in the final analysis. The only data cleaning that was done consisted of discarding four questionnaires where respondents almost exclusively selected "neither agree, nor disagree" and thereby potentially introducing extremity bias to the study.

No incentive was offered for completing the questionnaire as this often leads to nefarious conduct, such as multiple-completions of questionnaires by individuals attempting to increase their chances of winning a prize. Respondents were rather

encouraged to provide their opinions (or have their voices heard) and even though it did introduce an element of self-selection bias, this approach was preferred as opposed to offering an incentive.

6.8 MEASUREMENT

Measurement is operationalised as the process of assigning numbers to specific aspects of a constructs in a consistent and reliable manner in order to quantify the aspects under investigation (Zikmund & Babin, 2009: 238). It is necessary for a researcher to first define the concept being measured, before it can be accurately measured using a scale. In this scale, the concept is described as a constructed representation of the aspects the concept consists of and which represents a common understanding of the concept. A scale is a device or procedure designed to provide a range of values that represents the concept in differing degrees of magnitude (Zikmund & Babin, 2009: 240). The researcher specifies the values of a scale to correspond to some value of a concept. These concepts that can vary in value are then referred to as variables. In practice, most concepts are multi-dimensional and cannot be measured using a single variable, but require multiple items to be measured effectively, which are referred to as constructs. These constructs are then measured by a process known as operationalisation, which is the process of translating the operational definitions of the construct variables into measurement scales.

Operationalisation, therefore, entails two distinct processes: firstly, providing operational definitions of the construct variables under investigation, and secondly, to develop appropriate scales to measure the defined variables. These two processes are referred to as construct development and scale development.

6.8.1 Construct development

Hair *et al.* (2003: 377) describe a construct as theoretical construction that consists of a set of separately identifiable characteristics that in combination form a unique representation of that specific construct. The process of defining component responses or related behaviour is referred to as construct development and is

described as a scientific process of determining the collective data required to answer the research question. Construct development, therefore, is the process of defining exactly what constructs should be measured in order to address the objectives of the research project and deciding what the characteristics of these constructs are.

The method used to develop the constructs in this study was to adapt and combine the operational definitions of various previous studies and thereby deriving an expanded theoretical model of the Theory of Planned Behaviour. The operationalisation of the constructs modelled as independent and dependent variables in the proposed expanded model of the Theory of Planned Behaviour are presented in Table 6.3.

TABLE 6.3

OPERATIONALISATION OF CONTRUCTS

Construct	Operationalisation
Perceived usefulness	*Perceived usefulness* is the perception of the individual regarding the extent to which a particular system is able to assist him/her in increasing his/her vocational productivity (Davis, 1989).
Ease of use	Perceived *ease of use* refers to the perception of the individual regarding the amount of mental or physical effort that is needed to learn or use a new technology (Davis, 1989).
Perceived enjoyment	Davis *et al.* (1992) classify *Perceived enjoyment* as a type of intrinsic motivation and *Perceived usefulness* as a type of extrinsic motivation. They define *Perceived enjoyment* as the extent to which the activity of using a computer system is perceived to be personally enjoyable in its own right aside from the instrumental value of the technology.
Need to belong	The construct of belongingness or *Need to belong* is the pervasive human driving force to form and maintain a minimum quantity of lasting, positive and significant interpersonal relationships (Baumeister & Leary, 1995).
Collective self-esteem	*Collective self-esteem* is that part of an individual's self-concept, including the emotional significance, that is derived from the knowledge that the individual is a member of a social group (Tajfel & Bruner, 1981).

Need for cognition	The *Need for cognition* refers to an individual's motivation to behave in a specific manner as a result of pleasurable sensations derived from engaging in cognitive activities Cacioppo *et al.* (1984: 306).
Dispositional trust	The propensity to trust or *Dispositional trust* is an individual's pervasive willingness to generally depend on others and includes various situations and individuals (McKnight & Chervany, 2001).
Interpersonal trust	*Interpersonal trust*, in the context of this study, comprises a general trust that a social network user has in the other members of the social network.
Privacy risk	*Privacy risk* is the concern of individuals for the theft of their private information (loss of control over intrusion), or simply loss of anonymity and control over personal information (loss of control over disclosure), such as when information about a person is used without your knowledge or permission (Featherman & Pavlou, 2003, Cases, 2002). This includes: the sharing, selling of personal information; tracking of consumer activities online; placement of cookies on browsers, being contacted without consent and general invasion of privacy concerns (Miyazaki & Fernandez, 2001).
Psychological risk	*Psychological risk* reflects an individual's disappointment, sense of foolishness (or others who make us feel foolish) (Roselius, 1971), embarrassment or loss of *Self-esteem* (Mitchell & Greatorex, 1993), resulting from friends or family knowing a product or service has failed (Ueltschy *et al.*, 2007) or that a product or service results in inconsistency with self-image (Chen & He, 2003).
Social risk	*Social risk* refers to the probability (Kaplan *et al.*, 1974) that a product will negatively affect (Pires *et al.*, 2004) the opinion and reaction (Cases, 2002) other people hold of the individual, as perceived by that individual and represented by the individual's ego, which is defined as the individual's internal state of self-image control (Schiffman, 1972)
Susceptibility to norm influence	*Susceptibility to norm influence* refers to the susceptibility of decision-makers to the influence of reference groups, which is used as standards of comparison for self-appraisal or as a source of personal norms and attitudes.
Internet self-efficacy	*Internet self-efficacy* refers to the confidence an individual has to understand, navigate, and evaluate content online. Gangadharbatla (2008: 7)
Information-seeking	Includes aspects such as learning about local community events, getting useful information, finding bargains, and staying abreast with new technology.
Media drenching	Indicates users' increased usage of online photo albums.

Diversion	The use of social network sites for any form of entertainment.
Performance	Refers to users' media drenching, facilitating discussion of particular persons or things. Users then perform their identity for fans/followers and also show their attachment and knowledge.
Narcissism	Points to users' desire for increased visibility and knowledge as a basis for performance and their desire to show their special identities, not only on the Internet but also in the real world.
Relationship maintenance	Focuses on maintaining bonds with existing acquaintances, not forming new friends on the Internet.
Aesthetic experience	Refers to "affective-related gratification".
Virtual community	Refers to the process where users try to establish a new social life online.
Reference	Refers to the following of user-generated content as reference, such as a review of restaurants or other products (Hsu, 2007).

The operationalised constructs shown in Table 6.3 represent the modelled independent variables of this study, which served as the basis for developing the appropriate measurement scale.

6.8.2 Scale development

Hair *et al.* (2003: 393) identify the following four key aspects that need to be considered in order to develop high-quality scale measurements: understanding the defined information problem or research objectives, establishing the data requirements, identifying and developing the critical constructs, and understanding the critical components of a complete measurement scale.

6.8.2.1 Research objectives

The primary objective of this study was an analysis of the behavioural intentions and uses of both current users and non-users of Facebook, based on the factors identified in an expanded model of the Theory of Planned Behaviour. From this primary objective, two aspects were identified that the scales had to measure. Firstly, the measurement scale had to distinguish between users and non-users of Facebook, and secondly, the scales had to measure the theoretical constructs of an expanded model of the Theory of Planned Behaviour.

6.8.2.2 Data requirements

After the constructs under investigation had been developed, the type of data required needed to be determined. This study investigated behavioural intention as a consequence of users'/non-users' attitudes towards social networks. Zikmund and Babin (2009: 252) describe attitude as a pervasive disposition of individuals to behave in a particular manner when faced with specific situational variables such as people, activities, events, and objects.

This study examined attitudinal constructs and, thus, could not be directly observed. Therefore, the appropriate scale to be used could be described as a continuous, interval level scale (seeing that a seven-point Likert scale was used to measure respondents' attitudes towards social network sites). The scale format was balanced between agreement and disagreement and the scale descriptors used were: "strongly disagree", "disagree", "disagree somewhat", "neither agree nor disagree", "agree somewhat", "agree", "strongly agree". The scale descriptors were scored from 1 for "strongly disagree" to 7 for "strongly agree". All negatively worded questionnaire items all related to a single factor and no factor consisted of both positively and negatively worded items.

6.8.2.3 The critical constructs

A summary of the final scales used in the questionnaire to measure the constructs operationalised above, is represented in Annexure A. The two questionnaires used for the users and non-users of Facebook were almost identical except for minor differences in the phrasing as required by the two different contexts. The complete questionnaires are attached as Annexures B and C.

6.8.2.4 The critical components of the measurement scale

The final key aspect of scale development, according to Hair *et al.* (2003: 394), is to consider a number of scale development criteria, in order to develop the most appropriate measurement scales. The first is intelligibility, which indicates the degree to which the respondents understand the questions of the scale. The second is the appropriateness of descriptors, indicating to what extent the measurements measured the data required. The third criterion guiding scale development is the

concept of discriminatory power which is the scale's ability to differentiate between different constructs. The final criterion to be considered is scale reliability which is the scale's ability to yield the same results after considering several repeated measurements of the same constructs.

Questionnaire items which were negatively worded all related to a single factor and no factor consisted of both positively and negatively worded items. In order to test for intelligibility, the questionnaires were distributed among both academics and non-academics of various demographical and socio-graphic backgrounds. From the feedback received, minor adjustments were made to the questionnaire. Construct validity and reliability were tested, using a number of statistical techniques that are discussed later. Order bias was controlled for by randomising the individual construct items and heading or labels were minimised in order not to influence the respondents in any way.

6.9 QUESTIONNAIRE DEVELOPMENT

The current study's questionnaire consisted of the relevant elements used in the following studies:

Authors	Constructs investigated
Moore and Benbasat (1991)	Ease of use, Result demonstrability, Visibility, Trialability, Voluntariness, Relative advantage, Compatibility, Image
Venkatesh *et al.* (2003)	Performance expectancy, Effort expectancy, Attitude towards using technology, Social influence, Facilitating conditions, Self-efficacy, Anxiety
Barbeite and Weiss (2004)	Collective self-esteem for general/beginning activities, Anxiety using computers, Anxiety in computer-related activities
Alenezi, Abdulkarim and Veloo (2010)	Enjoyment, Computer anxiety, Perceived usefulness, Perceived ease of use, Internet self-efficacy, Internet experience
Cacioppo *et al.* (1984)	Need for cognition
Leary, Kelly, Cottrell and Schreindorfer (2013)	Need to belong scale
Shin (2010)	Perceived usefulness, Perceived enjoyment, Attitude, Intention to use/adopt, Flow, Perceived involvement, Perceived connectedness
Rosenberg (1965)	Self-esteem
Luhtanen and Crocker (1992)	Collective self-esteem

6.10 DATA ANALYSIS TECHNIQUES

A number of different methods of analysing the data were used in this study. These were frequency tables and cross tabulations, independent samples t-tests and one-way ANOVAs as well as co-variance based structural equation modelling (SEM).

6.10.1 Descriptive statistical methods

Descriptive research is the basic categorising and interpretation of data in order to identify the basic patterns of central tendency, distribution, and variability and includes measures such as, averages, medians, modes, variance, range and standard deviation. Descriptive statistics are a simple way to describe target population characteristics and are very widely used (Zikmund & Babin, 2009: 354).

The initial data analysis procedures include a descriptive analysis of the data to identify potential outliers and to assess the multi-variate normality of the data, using frequency distributions and tabulations.

6.10.2 Multivariate statistical methods

6.10.2.1 Independent samples t-test

A t-test is used to assess whether a statistically significant difference exists between the means of two independent respondent groups. The independent samples t-test tests whether the null hypothesis that the differences between the variances of two groups are equal to zero. If the t-test is significant, it indicates that the variances in the two groups are significantly different from zero and the null hypothesis (of no difference) could be rejected. If the p-value < 0.05 (Field, 2009: 204), it could then be concluded that a significant difference exists between the group with regard to the test variable.

The independent samples t-test is a parametric test based on normal distribution and assumes that the sampling distribution is normally distributed, that data are measured at least at the interval level, that there is homogeneity of variance and thus independent. In order to test for homogeneity of variance between the users and non-users of Facebook, a test called Levene's test was used. Levene's test tests

the null hypothesis that the variance in different groups is equal. If Levene's test is significant at p<.05, then the assumption of equal means is violated and that there is a significant difference in variances between the two groups (Field, 2009: 150). The independent samples t-test was used in this study to analyse the demographic data, as well as gratifications sought from social network usage.

6.10.2.2 Exploratory factor analysis

More than two variables were modelled and measured in this study and, therefore, multivariate techniques were required to analyse the data. The analysis of multiple, related variables was complicated by the likely overlap (correlation) that could possibly occur among a number of closely related variables. A technique often used to analyse the structure and relationships (correlations) among a large number of variables is called an exploratory factor analysis which tests the interrelatedness of the variables used in a specific analysis (Hair *et al.*, 2010: 93). A factor analysis in the current study was used as both a data summarising tool and a data reduction tool and to assess discriminant validity.

A crucial consideration when using a factor analysis is the decision rules to be used to determine the number of factors to be retained. The following decision rules proposed by Hair *et al.* (2010: 110) were considered in this study:

- Factors with eigenvalues greater than one should be retained.
- The predetermined number of factors, based on the research objectives or prior research, determined the numbers to be retained.
- Enough factors should be retained to explain at least 60% of the variance.
- Factors, shown by a scree plot to have substantial amounts of common variance, should be retained.

6.10.2.3 Factor rotation

Unrotated factor solutions are adequate for data reduction, but often do not provide the best interpretation of the variables being studied. The reason for this is that factor rotation simplifies the factor structure, by reducing some ambiguities and thus facilitates better interpretation. In the present study, the factors were expected to be

correlated, but the data were not expected to be normally distributed and, therefore, principal axis estimation was used with direct quartimin, oblique rotation.

6.10.3 The nature of structural equation modelling

A number of multivariate statistical techniques, such as multiple regression, factor analysis and discriminant analysis, provide researchers with powerful tools to investigate multiple variables. These multivariate techniques, however, all have one limitation in common: each tool is only able to examine a single relationship at a time. This limitation is especially problematic when the researcher is examining interrelated variables, such as the present study, which could not be adequately examined using only one relationship at a time.

Structural equation modelling (SEM) overcomes the single relationship limitation by interpreting the relationships among multiple variables simultaneously. Structural equation modelling analyses the interrelationships among a number of equations and functions in a similar way as a series of regression equations. It has the ability to examine the concurrent relationships among all the constructs involved in an analysis and was, therefore, used in this study. Structural equation modelling is essentially a combination of a confirmatory factor analysis and a series of multiple regression analyses, that is performed simultaneously in the form of a structural model (Hair *et al.*, 2010: 608). The estimation of the interdependent, multiple regression equations was simultaneously performed by specifying the theoretical model. The identification and specifying of the relationships among indicator variables and latent constructs were performed by specifying the measurement model to be used in the statistical analysis.

Hair *et al.* (2010: 627) identify the following six decision process stages in conducting a structural equation modelling analysis:

Stage I: Defining individual constructs

Stage II: Developing the overall measurement model

Stage II: Designing a study to produce empirical results

Stage IV: Assessing the measurement model validity

Stage V: Specifying the structural model

Stage VI: Assessing the structural model validity

Structural equation modelling represented a significant portion of the data analysis of the current study and, therefore, the aspects that have not been addressed in the previous sections, are described in detail following these decision process stages.

6.10.3.1 Defining the individual constructs

The independent variables consisted of the following: *Perceived usefulness, Perceived ease of use, Perceived enjoyment*, the *Need to belong*, *Self-esteem*, *Collective self-esteem*, the *Need for cognition*, *Dispositional trust*, *Interpersonal trust*, *Privacy risk*, *Psychological risk* and *Social risk*. The dependent variables were the following latent variables: *Information-seeking, Media drenching, Diversion, Performance, Narcissism, Relationship maintenance, Aesthetic experience, Virtual community* and *Reference*. Both the independent variables and dependent variables have been operationalised earlier.

6.10.3.2 Developing and specifying the measurement model

After the scale items were identified, the measurement model needed to be developed. Each latent construct that was to be included in the structural equation model and the items measuring those constructs were specified. The measurement model of this study is presented in Chapter 7.

6.10.3.3 Designing a study to predict empirical results

Specific structural equation modelling, design and estimation issues in the research process needed to be considered next. These issues included: the type of data to be analysed, strategies for dealing with missing data, model estimation techniques and computer software to be used (Hair *et al.*, 2010: 631). The study made use of a co-variances based approach to analyse the data. As far as missing data is concerned, only fully completed surveys were included in the data analyses.

6.10.3.4 Assessing measurement model validity

The measurement model's validity depends on the goodness-of-fit and the construct validity of the measurement model (Hair *et al.*, 2010: 638).

6.10.3.4.a Goodness-of-fit

After the specified model was estimated by the statistical software programme, it was necessary to compare how well the model resembled the observed item data, by comparing the estimated covariance matrix with the observed covariance matrix. Hair *et al.* (2010: 645) provide guidelines for assessing acceptable and unacceptable fit and provides guidelines that suggest that at least one incremental index, one absolute index, chi-square value and the associated degrees of freedom, as well as at least one badness-of-fit index should be reported.

In this study the incremental index to be reported was the Comparative fit index (CFI), the absolute index to be reported was the Root mean square error of approximation (RMSEA) and lastly, the Satorra-Bentler scaled Chi-square index and associated p-value and degrees of freedom are reported.

6.10.3.4.b Construct validity

Validity reflects the accuracy of research (Hair *et al.*, 2010: 678) and one major outcome of structural equation modeling is the assessment of construct validity, where construct validity represents how accurately the measurement scales measure the latent constructs. Construct validity provides evidence that the sample represents the population as a whole. Construct validity consists of four components, namely face validity, nomological validity, convergent validity, and discriminant validity (Hair *et al.*, 2010: 678).

Face validity refers to a theoretical understanding of the meaning of measurement items in order to assess whether they logically represent the constructs being studied. Nomological validity then ascertains whether the constructs in the measurement model logically make sense.

6.10.3.4.c Assessment of convergent validity

Convergent validity reflects the extent to which two measures of the same construct are related to one another (Hair *et al.*, 2010: 678). The measurement items of a

specific construct should converge or share a high common proportion of variance. The methods used to test for convergent validity in this study consisted of examining factor loadings, average variance extracted and to test for reliability using Cronbach's alpha.

The following decision rules, as suggested by Hair *et al.* (2010: 665), were used in this study:

- Standardised loading estimates should be 0.5 or higher, and ideally 0.7 or higher;
- Average variance extracted (AVE) should be 0.5 or greater to suggest adequate convergent validity;
- AVE estimates for two factors also should be greater than the square of the correlation between the two factors to provide evidence of discriminant validity; and
- Construct reliability should be 0.7 or higher to indicate adequate convergence or internal consistency.

6.10.3.4.d Assessment of discriminant validity

Discriminant validity is the extent to which a construct is truly distinct from other constructs. Evidence of discriminant validity confirms that a construct is unique and captures some phenomenon other measures do not (Hair *et al.*, 2010: 679). Discriminant validity means that a latent variable is able to account for more variance in the observed variables associated with it than a) measurement error or similar external, unmeasured influences; or b) other constructs within the conceptual framework (Farrell, 2010: 324). After comparing a number of methods to assess discriminant validity, including shared variance, average variance extracted (AVE), paired constructs tests and the multitrait-multimethod matrix, Farrell (2010: 326) recommend the following steps to assess discriminant validity:

- An exploratory factor analysis should be performed to identify items that cross-load;
- As part of a confirmatory factor analysis, paired correlation tests should be performed;
- Average variance extracted should be estimated for each construct; and

- Average variance extracted should be compared using the Fornell and Larcker (1981) shared variance test.

Shared variance is the total amount of variance one construct can explain in another construct and is represented by the square of the correlation of the two constructs. If independent constructs are correlated too highly, it could potentially point to discriminant validity concerns. The average variance extracted is the average of the squared correlations (factor loadings) across all observed variables and represents the average amount of variation that a latent construct can explain in the related theoretical model.

6.10.3.5 Specifying the structural model

Specifying the structural model requires the specification of the relationships among the constructs as prescribed by the theoretical model. The dependence relationships specified represent the hypotheses to be tested in the study. The structural model of this study is described in Chapter 7.

6.10.3.6 Assessing the structural model validity

The final step in the structural equation modelling process is the assessing of the validity of the structural model. The validity of the structural model, as is the case with the measurement model discussed above, depends on the goodness-of-fit and the construct validity of the measurement model.

6.10.4 Logistic regression analysis

An important objective of this study was to investigate the factors that could influence the use of social networks and, therefore, sample data were collected from two mutually exclusive respondent groups, namely users of Facebook and non-users of Facebook. Facebook usage or not represented membership of a group or non-membership and thus could be regarded as a dichotomous dependent variable, which cannot be analysed using simple linear regression (Aubrey *et al.*, 2008: 568). Simple linear regression analysis cannot be used to analyse the relationship between the independent and dependent variable, because the data were not

continuous or categorical, but can be represented as binary (0 if a non-user and 1 if a Facebook user).

Logistic regression overcomes the limitations of not having continuous or categorical data by using binomial probability theory, to predict the non-linear probability that multiple independent variables will affect membership of two mutually exclusive dependent variable categories (users and non-users of social media).

In addition to predicting the probability of group membership, logistic regression also provides the strength of the relationship among the variables by estimating an odds ratio, which predicts the change in the odds of group membership for a one unit increase in the independent variable (Aubrey *et al.*, 2008: 569).

According to Burns and Burns (2008: 569), the assumptions underlying the logistic regression analysis are the following:

- A linear relationship between the dependent and independent variables is not assumed;
- The dependent variable must be a dichotomous variable;
- The independent variables need not be interval, nor normally distributed, nor linearly related, nor of equal variance within each group; and
- A minimum of 50 cases per predictor is recommended.

6.11 SUMMARY

This chapter described the systematic methods and procedures to be followed in the empirical process of enquiry followed. The objective of this systematic, empirical process is to ensure the validity (especially construct validity) and reliability of the data and processes used in this study. The current research is described as deductive, quantitative research, consisting of both descriptive and relational elements, the purpose being to compare the intentions to use the Internet by users and non-users of the largest social network site Facebook. A non-probability convenience sampling was drawn using a multi-method consisting of a combination of self-selection, quota sampling and snowball sampling. The self-administered survey questionnaires were administered to both online sources and real-world

sources. The constructs used in the study and the measurement scales used to measure these constructs were discussed. The data collected were organised and analysed using frequency tables and cross tabulations, independent samples t-tests and one way ANOVAs as well as co-variance based structural equation modelling (SEM). The empirical results of the study are presented in Chapter 7.

Chapter 7

EMPIRICAL RESULTS AND FINDINGS

7.1 INTRODUCTION

The preceding chapter described the empirical research design that was used in order to ensure the validity and reliability of the data. The primary objective of the study was to compare the *Continued intention to use* or *Intention to use* Facebook, and the type of uses of Facebook between users and non-users of Facebook. The purpose of this chapter is to describe the implementation of the procedures discussed in Chapter 6, to organise and analyse the collected empirical data and to address the study objectives.

The research design prescribed the types and order of statistical analyses that were performed. Firstly, descriptive statistics summarised the sample data, using frequency tables and relationships between demographics; specific Facebook behaviours were explored using cross-tabulations, independent samples t-tests and a one-way ANOVA. Secondly, the results of the exploratory factor analyses were analysed, the discriminant validity confirmed and constructs redefined, where necessary. The normality of the data was assessed and Cronbach's Alpha was used to assess the reliability of the constructs. The relationships between the constructs that demonstrated sufficient validity and reliability were presented in a path diagram and the path coefficients of these relationships were determined using structural equation modelling. A logistic regression analysis was used to assess the probability of group membership (either a user or a non-user of Facebook), based on multiple independent variables and finally, the gratifications sought from using social networks were analysed using independent samples t-tests.

7.2 DESCRIPTIVE STATISTICS

Frequency tables were used to develop descriptive statistics to describe the two samples based on the key variables. The characteristics of the users and non-users of Facebook were compared to the overall characteristics of the English-speaking

Facebook population with regard to age and gender (key demographical criteria used to determine the quota dimensions). This comparison was made to assess how closely the sample characteristics resembled those of the population as a whole.

7.2.1 Users of Facebook

7.2.1.1 Frequency tables

7.2.1.1.a Gender

The users of the Facebook sub-sample consisted of 155 females and 152 males or a distribution of 50.5% females and 49.5% males, which very closely resemble the general Facebook population distribution of 51% females and 49% males. The users of Facebook gender distribution are presented in Table 7.1.

TABLE 7.1

GENDER OF THE USERS OF FACEBOOK

Gender	Frequency	% of users of Facebook of current study	% of users of Facebook of Facebook population
Females	155	50.5	51
Males	152	49.5	49
Total	307	100	100

Source: http://www.socialbakers.com/facebook-statistics/south-africa

7.2.1.1.b Age distribution

The age distribution of the sample of Facebook users is presented in Table 7.2. The respondents' ages ranged from 15 years of age to 72 years, with the largest concentration of respondents (156 respondents or 53%), falling in the 15-25 year old age category, thereafter a gradual decline in respondents in the older categories followed, as shown in Table 7.2. The 26-35 years age category consisted of 74 respondents (21%); the 36-45 year old age category of 44 respondents (15%); the 46-55 category of 17 respondents (6%); the 56-65 category of 13 respondents (4%) and the over 65 year old age category consisted of three respondents or 1% of the overall sample of users of Facebook. The age distribution of the users of the Facebook sub-sample closely resembles that of the Facebook population as a whole. The mean age for users of Facebook was 28.5 years.

TABLE 7.2

AGE DISTRIBUTION OF THE USERS OF FACEBOOK

Age	Frequency	% of users of Facebook of current study	% of users of Facebook population
15-25	156	50.81	47
26-35	74	24.1	25
36-45	44	14.33	15
46-55	17	5.54	8
56-65	13	4.23	5
65+	3	0.98	0
Total	307	100.0	100.0

Source: http://www.socialbakers.com/facebook-statistics/south-africa

7.2.1.1.c Ethnic distribution of users of Facebook

The ethnic classifications used in the study were based on the ethnic classification used by *Statistics South Africa* and are presented in Table 7.3. The largest portion of the sample consisted of 76.9% White users, followed by 14.0% Black users, 6.5% Coloured users, 1.6% Asian users and 1% Indian users. There was a discrepancy in the ethnic distribution, with the Black ethnic group being under-represented by 17.1% and the White ethnic group being over-represented by 27.1%. This discrepancy could be attributable to the snowball sampling methodology employed and could influence the representativeness of the sample of the whole Facebook population.

TABLE 7.3

ETHNIC DISTRIBUTION OF THE USERS OF FACEBOOK

Race	Frequency	% of users of Facebook of current study	% of users of Facebook population
Black	43	14.01	33.21
Coloured	20	6.51	7.16
Indian	8	2.61	4.84
White	236	76.87	49.81
Total	307	100.0	100

Source: http://mybroadband.co.za/news/internet/109396-south-african-internet-users-age-gender-and-race.html

7.2.1.1.d Number of years' membership of Facebook

Table 7.4 provides the number of years' membership of Facebook of those who participated in the study. The number of years' membership of Facebook ranged between one month (0.08 year) and 10 years, with an average membership of 2.7 years per user.

TABLE 7.4

NUMBER OF YEARS OF FACEBOOK MEMBERSHIP

n	Minimum	Maximum	Mean
307	0.08	10	2.76

7.2.1.1.e Number of hours spent on Facebook per week

The amount of time that users spent on Facebook ranged from 20 minutes per week to 40 hours per week, with a mean of 4.6 hours per user per week as shown in Table 7.5. The sample mean for the number of hours spent online (4.6 hours per week) is considerably higher than that of the general Facebook population (1.94), which is consistent with the findings that South African Facebook users are more frequent users of Facebook than the general, worldwide Facebook user.

TABLE 7.5

NUMBER OF HOURS SPENT ON FACEBOOK PER WEEK

n	Minimum	Maximum	Mean	Facebook population mean
307	0.3	40	4.61	1.94

Source: http://www.bluemagnet.co.za/blog/the-current-state-of-social-media-in-south-frica

7.2.1.1.f Number of Facebook visits per week

In Table 7.6 the number of times that Facebook users visited their Facebook web pages is shown and ranged from once per week to a maximum of 100 times per week, with a mean of approximately 11 visits per week. The sample mean for number of Facebook visits of the sample (10.9) was substantially higher than the Facebook population mean, which is consistent with the greater proportionate Facebook usage in South Africa compared to the rest of the world (Cha, 2010).

TABLE 7.6

NUMBER OF FACEBOOK VISITS PER WEEK

n	Minimum	Maximum	Mean	Facebook population mean
307	1	100	10.99	5.96

7.2.1.1.g Number of Facebook friends

The number of Facebook friends of the sample range from two friends to a maximum of 1 700 friends, with a mean of 292 friends per user, as shown in Table 7.7. This number is relatively high compared to that of the general Facebook population who has an average of 130 friends per Facebook user (*Facebook Statistics*, 2014).

TABLE 7.7

NUMBER OF FACEBOOK FRIENDS

n	Minimum	Maximum	Mean	Facebook population mean
307	2	1 700	292.03	130

To summarise, the sample demographics of the users of Facebook respondents of this study compared reasonably well with both the South African Facebook users, as well as Facebook users worldwide. The sample demographics was further analysed to assess whether a relationship existed between the sample demographics and specific social network usage.

7.3 THE INFLUENCE OF DEMOGRAPHIC CHARACTERISTICS ON FACEBOOK USAGE

The primary objective of this study was to investigate the motivators and barriers that influence Facebook usage. A secondary objective was to assess the influence of demographical characteristics on specific aspects of Facebook usage. To this end, the influence of demographic data on Facebook usage was analysed using cross-tabulations, t-tests and one-way ANOVA tests.

Cross-tabulations were conducted to develop additional descriptive statistics by cross-tabulating age and gender with specific Facebook usage characteristics (such as the duration of social network membership, the number of visits per week, time spent on the social network per week and number of social network friends). Next, t-tests and one-way ANOVAs were conducted to investigate whether the demographical variables of gender and age had an influence on reported Facebook usage, particularly duration of social network membership, the number of visits per week, time spent on the social network per week and number of social network friends. The following four null hypotheses were formulated to investigate the stated relationships:

H_{0a}: There is no relationship between gender and length of Facebook network membership

H_{0b}: There is no relationship between gender and number of Facebook visits per week

H_{0c}: There is no relationship between gender and time spent on Facebook per week

H_{0d}: There is no relationship between gender and number of Facebook friends

H_{0e}: There is no relationship between age and duration of Facebook network membership

H_{0f}: There is no relationship between age and number of Facebook visits per week

H_{0g}: There is no relationship between age and time spent on Facebook per week

H_{0h}: There is no relationship between age and number of Facebook friends

7.3.1 Cross-tabulations

Cross tabulations were used to explore whether systematic differences among the demographical data existed. Age and gender were cross-tabulated to analyse whether the age and gender were similarly represented in the composition of the sample. Thereafter, age and gender were cross-tabulated with the number of years' membership, hours spent on Facebook, the number of visits to Facebook per week and the number of Facebook friends. The cross-tabulation of age and gender with

specific usage characteristics were constructed to ascertain whether differences existed between gender and between different age groups, with regard to these specific usage characteristics.

7.3.1.1 Age and gender

Table 7.8 shows the gender classification of respondents in various age categories. The age groups 46-55 years, 56-65 years and 65+ years were collapsed into one age category namely 46+ years, because the individual age categories had too few observations each. The cross-tabulation showed that the classification was similar between females and males in the age categories of above 36 years of age. A minor discrepancy was found in the representation in the age groups 15–25 years, where female users comprised 56.1% of the overall sample of females, compared to the 45.4% of male Facebook users. Another discrepancy in the representation was in the 26–35 year old age group, with female users comprising 17.4% of the total sample and male users 30.9%. When these two age groups were combined, however, it showed a very similar representation with female users in the combined age group of 15-35 years comprising 73.6% of the overall sample of females, compared to 76.3% for male users. The combined age group of 15-35 years represented the overwhelming majority of Facebook users in the general Facebook population and it was, therefore, important that the representation for males and females in that specific age group was representative of the larger population, as shown in Table 7.8.

TABLE 7.8

CROSS-TABULATION OF THE USERS OF FACEBOOK'S GENDER WITH AGE

Age	Female		Male	
	Frequency	% of female users	Frequency	% of male users
15-25	87	56.13	69	45.39
26-35	27	17.42	47	30.92
36-45	24	15.48	20	13.16
46+	17	10.97	16	10.53
Total	155	100.0	152	100.0

7.3.1.2 Age and number of years of Facebook membership, hours spent on Facebook, number of visits and number of Facebook friends on Facebook

Table 7.9 presents a cross-tabulation of the different age groups and the number of years of membership of Facebook, the average number of hours users spent on Facebook per week, the average number of times a user visits their Facebook webpage per week, as well as the average number of friends each user has.

The age group 26-35 years showed the longest membership of Facebook, with an average of 3.06 years, followed by the age category 15-25 years and 46+ years, with an average membership of 2.81 years and 2.76 years respectively. The 36–45 year old age group, with an average membership of 2.28 years, showed the shortest number of years' membership of Facebook.

The average number of female Facebook visits per week was again higher for the younger age categories, with the 15-25 years age group visiting Facebook 12.69 times per week and the 26-35 years age group visiting Facebook 11.39 times per week. The other age groups were similar in the number of times they visited Facebook per week, with the age group 36–45 years visiting 5.63 times per week and the 46+ years age group visiting 6.45 times per week.

The average number of Facebook friends per user was once again higher for the 15-25 year old age group and the 26–35 year old age group, with an average of 373.0 and 282.5 friends respectively. The age group 36–45 years had an average of 153.1 friends per user and the age group 46+ years had 115.88 friends per user.

Based on these simple observations, it appears as if the combined age groups 15-35 years did not only represent the highest percentage membership of Facebook (72%) compared to the other age groups, but also spent the most time on Facebook per week, visited Facebook the highest number of times per week and had the most friends.

TABLE 7.9

CROSS-TABULATION OF AGE AND YEARS OF MEMBERSHIP, HOURS SPENT ON FACEBOOK, NUMBER OF VISITS AND NUMBER OF FACEBOOK FRIENDS

Age	Average number of years' membership of Facebook	Average number of hours spent on Facebook per week	Average number of Facebook visits per week	Average number of Facebook friends
15-25	2.81	5.16	12.69	373.01
26-35	3.06	4.76	11.39	282.47
36-45	2.28	3.36	5.63	153.14
46+	2.46	3.35	6.45	115.88
Average of entire sample	2.76	4.61	10.69	292.06

7.3.1.3 Gender and years of membership, hours spent on Facebook, number of visits and number of Facebook friends

Gender was cross-tabulated with years of Facebook membership, the number of hours spent on Facebook per week, the number of visits to Facebook per week and the number of Facebook friends. This was done to investigate whether systematic differences existed between males and females, with regard to their Facebook usage.

Table 7.10 shows the relationship between gender and number of years' membership of Facebook, hours spent on Facebook per week, the number of visits to Facebook per week and the average number of Facebook friends per Facebook user. On average, female and male membership duration was almost identical, with averages of 2.74 and 2.79 years respectively. The female respondents spent an average of 5.3 hours per week on Facebook, compared to the 3.9 hours male users spent on Facebook. Even though the females in the sample spent more time on Facebook, male users visited Facebook more regularly, with on average 11.3 visits per week, compared to 10.7 for females. Females on average had more Facebook friends than males (304.6 and 279.2 respectively).

Based on the observation of the cross-tabulation of Facebook usage with gender (Table 7.10), it appears that women spent more time visiting Facebook than men did. The usage of Facebook with regard to the number of years' membership of

Facebook, the number of visits to Facebook per week and the number of Facebook friends was reasonably similar between males and females.

TABLE 7.10

CROSS-TABULATION OF GENDER AND YEARS OF MEMBERSHIP, HOURS SPENT ON FACEBOOK, NUMBER OF VISITS AND NUMBER OF FACEBOOK FRIENDS

	Average number of membership years of Facebook	Average number of hours spent on Facebook per week	Average number of Facebook visits per week	Average number of Facebook friends
Female	2.74	5.31	10.65	304.58
Male	2.79	3.90	11.34	279.24

7.3.2 Independent samples t-test

In order to investigate whether the differences in the means between female and male with regard to years of membership, time spent on Facebook, the number of visits to Facebook and the number of Facebook friends were statistically significantly different, an independent samples t-test was performed. The results are summarised in Table 7.11.

Independent t-tests to assess the relationship between gender and years of membership (f=0.980 and p=0.323), the number of Facebook visits (f=0.342 and 0.559) and the number of Facebook friends (f=0.711 and 0.400), all had a value smaller than 1.96 and significance levels > 0.05 and, therefore, the null hypothesis that assumes equal means could not be rejected. There was thus not a significant difference between female and male users of Facebook, with regard to membership duration, the number of Facebook visits and the number of Facebook friends. The **null Hypotheses H_{0a}, H_{0b} and H_{0d} were, therefore, failed to be rejected.**

In terms of gender and hours spent on Facebook per week, the independent samples t-test was significant (f=6.336 and p=0.012), which indicated that for the relationship between gender and time spent on Facebook, equal means could not be assumed. The t-test results show a significant difference at the 5% significance level (t=2.336, df=305 and p=0.019) between the number of hours females and males spent on Facebook per week. **Therefore, the null hypothesis H_{0c} was rejected.**

TABLE 7.11

GENDER DIFFERENCES WITH REGARD TO: YEARS OF MEMBERSHIP, HOURS SPENT ON FACEBOOK, NUMBER OF VISITS AND NUMBER OF FACEBOOK FRIENDS

Dimensions	Mean for females	Mean for males	Levene's test for equality of Variances		t-test for equality of means		
			F	Sig (p)	t	df	p
Average number of membership years of Facebook	2.74	2.79	0.980	0.323	-0.228	303.144	0.820
Average number of hours spent on Facebook per week	5.31	3.90	6.336	0.012	2.336	305	0.019 *
Average number of Facebook visits per week	10.65	11.34	0.342	0.559	0-.398	300.463	0.691
Average number of Facebook friends	304.58	279.24	0.711	0.400	0.780	289.843	0.436

* = $p < 0.05$

7.3.3 Influence of age and years of membership, hours spent on Facebook, number of visits and number of Facebook friends

In order to investigate whether statically significant differences existed between the four age categories (independent variable for the ANOVA) and membership years, hours spent on Facebook, the number of Facebook visits and the number of Facebook friends (dependent variable), a one-way ANOVA was conducted. An ANOVA was the appropriate technique as opposed to a t-test, because age consisted of four categories and all the dependant variables were intervally-scaled.

The ANOVA results indicated that age had no influence on years of membership (F=1.488, p=0.194) and hours spent on Facebook (F=1.320, p=0.255), whereas age had a statistically significant influence on the number of visits to Facebook per week (F=1.943, p=0.010) and the number of Facebook friends (F=8.298, p=0.000). **Therefore, the null hypotheses H_{0e} and H_{0g} were failed to be rejected while hypotheses H_{0f}** and **H_{0h}** had to be re-examined, using a post-hoc test.

Considering that the age categories were not equal in terms of the intervals chosen, the Scheffe post-hoc test was conducted to identify which of the age sub-group(s) showed statistically significant differences with regard to the number of visits to Facebook per week and the number of Facebook friends.

The Scheffe post-hoc test for the number of Facebook visits did not show any statistically significant differences in the means of the age groups. **Therefore, the null hypothesis H_{0f} was failed to be rejected.** The Scheffe post-hoc test for the number of Facebook friends showed significant differences between the age groups 15-25 years and 36–45 years, between 15–25 years and 46+ years, as well as between the age groups 26–35 years and 46+ years, and thus **the null hypothesis H_{0g} was rejected.** The significance of these differences in age groups will be discussed in Chapter 8.

7.3.4 Non-users of Facebook

7.3.4.1 Frequency tables

7.3.4.1.a Gender

The non-users of Facebook consisted of 170 females and 152 males, which equated to a distribution of 50.9% females and 49.1% males, which very closely resembled the general Facebook population distribution of 51% females and 49% males. The gender distribution for non-users of Facebook is shown in Table 7.12.

Table 7.12

GENDER OF THE NON-USERS OF FACEBOOK

Gender	Frequency	% of users of Facebook of current study	% of users of Facebook of Facebook population
Females	170	50.9	51
Males	164	49.1	49
Total	334	100	100

7.3.4.1.b Age distribution

The non-users of Facebook ages ranged from 15 years of age to 72 years. The majority of the non-users fell in the 15-25 years age category (125 respondents or 37.4%), followed by a similar number of respondents for the 26-35 years and 36-45 years age groups, with 22.5% (75 respondents) and 23.7% (79 respondents) respectively. The 46-55 year old category had 9.6% (32 respondents) and the 56+ year age old category had 6.9% representation (23 respondents). The age distribution of the non-users of Facebook differed slightly from the general Facebook population age distribution, with the 15-25 years age group sample being under-represented and the 36-45 years age group over-represented. The mean age for non-users of Facebook was 32.3 years. For the purposes of this study, the age distribution was still regarded as a reasonable representation of the overall age distribution of the general Facebook population, because the ages of the non-users in general, tended to be higher. The age distribution for non-users is presented in Table 7.13.

TABLE 7.13

AGE DISTRIBUTION OF THE NON-USERS OF FACEBOOK

Age	Frequency	% of users of Facebook of current study	% of users of Facebook of Facebook population
15-25	125	37.43	47
26-35	75	22.46	25
36-45	79	23.65	15
46-55	32	9.58	8
56+	23	6.89	5
Total	334	100.0	100.0

7.3.4.1.c Ethnic distribution of non-users of Facebook

The ethnic distribution of the non-users of Facebook, illustrated in Table 7.14, showed that the ethnic distribution of non-users of Facebook closely represented that of the general Facebook population. The biggest difference, namely 11%, was between black users of the sample and black users of the general population. The highest percentage of respondents was again white, with a 59.9% representation, but with the non-users sample there was only a 10% difference between white users and non-users. The sample for the non-users more closely represented that of the

general Facebook population and this characteristic would contribute to the argument that the non-user sample results could be cautiously generalised to the general Facebook population, seeing that the demographic characteristics were very similar.

TABLE 7.14

ETHNIC DISTRIBUTION OF THE NON-USERS OF FACEBOOK

Race	Frequency	% of users of Facebook of current study	% of users of Facebook population
Black	72	21.56	33.21
Coloured	43	12.87	7.16
Indian	19	5.69	4.84
White	200	59.88	49.81
Total	t334	100.0	100

7.3.4.2 Cross-tabulations

7.3.4.2.a Age and gender

The gender classification of respondents in various age categories, as presented in Table 7.15, showed a similar distribution between female and males in each of the age categories, except for the age groups 15-25 years and 26-35 years with a maximum difference of only 5%. The gender distribution in the different age groups was very similar and, therefore, acceptable for this study.

TABLE 7.15

CROSS-TABULATION OF THE NON-USERS OF FACEBOOK'S GENDER WITH AGE

Age	Female		Male	
	Frequency	% of female users	Frequency	% of male users
15-25	67	39.41	58	35.37
26-35	34	20.00	41	25.00
36-45	39	22.94	40	24.39
46-55	17	10.00	15	9.15
56-65	8	4.71	7	4.27
65+	5	2.94	3	1.83
Total	170	100.0	164	100.0

7.4 VALIDITY OF THE MEASURING INSTRUMENT

In order to analyse the fundamental interrelationships among constructs and the basic structure of the data, an exploratory factor analysis serves as the starting point for more complex multivariate analyses (Hair, Black, Babin & Anderson, 2010: 97). The recommended number of items to be used per construct is five and with regard to sample size an absolute minimum of 50 respondents as well as more respondents than items are required (Hair *et al.*, 2010: 99).

An exploratory factor analysis was conducted for both the users and non-users of Facebook in order to test for discriminant validity and discard the items that did not illustrate sufficient discriminant validity. In this way, only valid items measuring the latent constructs were included in the confirmatory factor analysis as part of the structural equation modelling process.

The choice of extracting (defining) the factors to be used in the analysis, was based on the basic characteristics of the items. If the items are assumed not to be correlated, principal components analysis, which contains a small percentage of unique variance, is recommended.

If the items are assumed to be correlated, then Principal Axis Factoring or Common Factor Analysis is recommended (Hair *et al.*, 2010: 104).

Orthogonal rotation should be used when the items are regarded as uncorrelated whereas oblique rotation is best suited for items that are regarded as being correlated (Hair *et al.*, 2010: 113). The factors influencing social media usage were regarded as correlated and, therefore, Principal Axis Factoring with direct quartimin oblique rotation was specified as extraction and rotation methods for the exploratory factor analysis.

In order for the correlation between the variable and the factor to be regarded as significant, the factor loading has to be greater than the minimal level of 0.4 for a sample size greater than 100. For items to be retained for the structural equation modelling of the barriers and motivators of the Facebook usage model (which had a sample size of more than 100), the factor loadings of items had to be greater than 0.4 (Hair *et al.*, 2010: 114).

The appropriateness of the factor analysis was assessed by using the Kaiser-Meyer-Olkin measure of sampling adequacy (MSA) and the Bartlett's test for sphericity. The measure of sampling adequacy index ranged from 0 to 1, with a score above 0.8 regarded as meritorious and a score of 0.7 or above as middling (Hair *et al.*, 2010: 101). The Kaiser-Meyer-Olkin measure of sampling adequacy for users of Facebook returned a value of 0.880 and the Bartlett's test for sphericity was significant with $p<0.01$, which indicated that the data were factor-analysable.

7.5 FACTOR STRUCTURE FOR THE USERS OF FACEBOOK

The factorability of the items influencing the continued usage of Facebook for users of Facebook were assessed to identify the items that were to be included in the structural equation modelling procedure. Table 7.16 presents the complete list of factor loadings for all items used to assess the *Continued intention to use* Facebook by current users of Facebook, after which the factors and measurement items are discussed individually.

TABLE 7.16

FACTOR STRUCTURE FOR THE USERS OF FACEBOOK

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10
DT1	**.845**	-.021	-.055	-.067	.028	-.021	-.054	-.011	.052	.029
DT2	**.909**	-.052	-.005	-.044	-.028	.048	-.052	-.002	.028	.013
DT3	**.775**	-.054	.037	.023	-.068	-.010	.017	-.065	-.016	-.045
DT4	**.761**	.128	.035	.147	.098	-.087	.093	.069	-.091	.013
EOU1	-.103	**.643**	-.016	.022	.262	-.165	-.142	-.030	-.088	-.015
EOU3	.006	**.789**	.046	.063	.082	-.018	-.095	-.067	.008	.013
EOU4	.012	**.754**	-.128	.022	-.014	.101	.161	.009	-.024	-.010
EOU6	.057	**.810**	.007	.047	.006	.054	.060	.064	.050	-.105
ISE3	.047	-.063	**.752**	.000	-.026	-.076	-.025	-.013	-.017	-.044
ISE4	-.013	.022	**.704**	-.034	-.038	.003	-.056	-.088	-.014	-.007
ISE5	-.037	-.021	**.644**	.172	.047	.027	.063	.032	.005	-.036
NFC2	.000	-.097	-.018	**.660**	.001	-.104	-.139	-.078	.066	.062
NFC3	.075	-.011	-.033	**.622**	-.032	.127	.101	-.066	-.096	-.005
NFC5	-.041	.022	-.074	**.656**	.022	.050	-.001	.146	.037	-.060
PE1	-.014	-.127	.035	-.004	**.784**	-.114	-.166	-.067	.009	-.127
PE2	.013	-.377	-.011	-.061	**.760**	-.145	-.153	-.044	.031	-.017

PE3	-.043	.032	.075	-.025	**.775**	.054	.076	-.169	-.115	-.013
PE4	.009	-.114	-.059	-.063	**.839**	.139	.100	.011	-.069	.015
PE5	.030	.006	-.014	.066	**.850**	.040	.023	-.050	.046	-.037
PE6	.089	-.031	-.019	.057	**.740**	-.118	-.063	.001	-.054	-.120
PRIV1	-.111	-.007	.073	.109	.001	**.675**	-.045	-.053	-.001	.053
PRIV4	.030	-.012	-.065	.039	.078	**.712**	-.067	.089	.080	.031
PRIV5	-.087	-.087	.023	-.041	.008	**.803**	-.072	.017	.043	-.027
PRIV6	.041	.045	.081	-.002	-.060	**.654**	-.116	-.067	-.107	-.047
PSYC3	-.007	.029	-.001	.036	.060	.154	**.771**	.033	.073	-.044
SOC2	-.052	-.008	.025	.027	-.082	.279	**.674**	-.073	-.191	-.013
SOC3	-.014	.095	-.037	.062	-.054	.202	**.661**	.045	-.181	-.003
PU1	-.020	-.009	.029	.062	.036	-.053	.030	**.680**	.024	-.066
PU2	.042	-.176	-.023	-.032	-.051	.013	-.043	**.662**	-.075	-.101
PU5	.065	.183	-.192	-.053	.143	.009	-.018	**.786**	-.105	.033
PU6	.066	.063	-.134	-.026	.127	.082	.080	**.810**	-.128	-.103
CSES6	.029	-.039	.134	.035	.036	.096	-.040	-.230	**.655**	-.118
SNI3	.084	-.039	-.058	-.051	.056	.038	.052	.007	**.703**	.001
SNI4	.007	.050	-.064	.018	.041	-.057	-.048	.001	**.795**	.034
SNI5	-.057	-.004	.042	.038	.030	.005	-.005	-.036	**.778**	.014
SNI6	-.016	-.004	.004	-.028	-.056	-.068	-.024	.014	**.701**	-.056
ITO2	.067	.033	-.069	.009	.120	-.016	.066	-.205	.016	**.635**
ITO3	-.019	-.040	.024	-.009	.004	-.029	-.071	.003	-.021	**.685**
ITO4	.055	.011	.063	.018	.433	.011	-.036	.093	-.050	**.663**
ITO5	.016	.008	-.114	.005	-.041	.004	-.002	-.041	-.021	**.715**
ITO6	-.022	-.037	-.006	-.007	.000	.018	.040	-.028	.000	**.803**

7.5.1 Collective self-esteem of users of Facebook

Collective self-esteem (CSES) is the social identity that an individual derives from belonging to a group. Four of the items measuring *Collective self-esteem* (CSES1, CSES2, CSES4, and CSES6), expected to load onto this variable, did not load sufficiently on a single factor. Item CSES3 loaded on the related factor *Susceptibility to norm influence*. Due to this evidence of poor discriminant and construct validity, the latent variable *Collective self-esteem* was removed from the final structural model.

7.5.2 Dispositional trust of users of Facebook

Dispositional trust (DT) refers to an individual's propensity to depend on others in various circumstances. All the items expected to measure *Dispositional trust* loaded

as expected, except for DT5 (*People usually try to cooperate with others*). The factor loadings for *Dispositional trust* are presented in Table 7.17.

TABLE 7.17

FACTOR STRUCTURE – DISPOSITIONAL TRUST

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
DISPOSITIONAL TRUST (DT)	DT1	Most people can be trusted	0.845
	DT2	Most people try to be fair	0.909
	DT3	Most of the time people try to be helpful	0.775
	DT4	People mostly tell the truth	0.761

7.5.3 Perceived ease of use of users of Facebook

Perceived ease of use (EOU), in a technological context, is the belief that using technology will be effortless. Two of the six items used to measure the latent variable *Perceived ease of use* EOU2 (*It took little effort for me to become skillful at using Facebook*) and EOU5 (*Using Facebook do not require a great deal of mental effort*) did not load to a significant extent and were omitted from the final analysis. The factor loadings for *Perceived ease of use* are presented in Table 7.18.

TABLE 7.18

FACTOR STRUCTURE – PERCEIVED EASE OF USE

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
PERCEIVED EASE OF USE (EOU)	EOU1	Interaction with Facebook is simple	0.643
	EOU3	I find Facebook easy to use	0.789
	EOU4	Learning to navigate Facebook was easy for me	0.754
	EOU6	It is easy to understand how to use Facebook	0.810

7.5.4 Interpersonal trust of users of Facebook

The general trust that an individual has in others using the same technology is referred to as *Interpersonal trust* (IPT). None of the items, that were expected to load on this variable, loaded sufficiently on a single factor. As a result of this lack of

evidence of sufficient discriminant and construct validity, the latent variable *Interpersonal trust* (IPT2, IPT3, IPT4, IPT5, and IPT6) was excluded from the final model.

7.5.5 Internet self-efficacy of users of Facebook

The confidence that an individual has in his or her ability to use the Internet is referred to as *Internet self-efficacy* (ISE). This item loaded sufficiently on four variables. The items ISE2 (*I feel confident understanding terms/words relating to Internet hardware*) and ISE6 (*I am comfortable using the Internet and feel no anxiety while using it*) did not load to a sufficient extent and were excluded. The factor loadings are set out in Table 7.19.

TABLE 7.19

FACTOR STRUCTURE – INTERNET SELF-EFFICACY

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
INTERNET SELF-EFFICACY (ISE)	ISE3	I feel confident troubleshooting Internet problems	0.752
	ISE4	I feel confident explaining why a programme will not run on the Internet	0.704
	ISE5	I feel confident learning advanced skills within a specific Internet programme	0.644

7.5.6 Need for cognition of users of Facebook

The *Need for cognition* (NFC) refers to an individual deriving pleasure from engaging in cognitive activities. Only three of the six items of *Need for cognition* loaded sufficiently, with the items NFC4 (*I like to have the responsibility of handling a situation that requires a lot of thinking*), NFC6 (*The notion of thinking "out of the box" is appealing to me*) and NFC7 (*I feel satisfaction after completing a task that required a lot of mental effort*) not loading to a sufficient extent, and were therefore deleted. The factors that loaded significantly are shown in Table 7.20.

TABLE 7.20

FACTOR STRUCTURE – NEED FOR COGNITION

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
NEED FOR COGNITION (NFC)	NFC2	I like to have the responsibility of handling a situation that requires a lot of thinking	0.660
	NFC3	I enjoy thinking hard and for long hours	0.622
	NFC5	I really enjoy a task that involves finding new solutions to problems	0.656

7.5.7 Need to belong of users of Facebook

The individual longing to form a significant relationship, or the *Need to belong* (NTB) items (NTB2, NTB3, NTB4, NTB5, NTB6) all did not load sufficiently and, therefore, displayed poor discriminant and construct validity. *Need to belong* was therefore not included in the final analysis. This result indicated a degree of consistency in the exploratory factor analysis results as the closely related factor *Interpersonal trust* or the general trust that an individual has in others using the same technology, was also found not to display sufficient discriminant and construct validity.

7.5.8 Perceived enjoyment of users of Facebook

Perceived enjoyment (PE) is the hedonistic satisfaction an individual derives from using technology. All the items of *Perceived enjoyment* (PE1, PE2, PE3, PE4, PE5, and PE6) loaded to a sufficient extent and were, therefore, retained. The factor loadings of *Perceived enjoyment* are presented in Table 7.21.

TABLE 7.21

FACTOR STRUCTURE – PERCEIVED ENJOYMENT

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
PERCEIVED ENJOYMENT (PE)	PE1	Using Facebook is entertaining	0.784
	PE2	I find Facebook pleasant to use	0.760
	PE3	Participating in Facebook is exciting	0.775
	PE4	Facebook is fun to use	0.839
	PE5	Participating in Facebook is enjoyable	0.850
	PE6	I believe that participating in Facebook would be pleasurable	0.740

7.5.9 Privacy risk of users of Facebook

The risk an individual perceives that he or she can lose control over what happens to his or her private information is referred to as *Privacy risk* (PRIV). All items loaded sufficiently on *Privacy risk*, except for PRIV2 (Facebook do not respect their users' personal information) and PRIV3 (*I am concerned with some of the aspects I read in the privacy statement of Facebook*), which was excluded from the final analysis. The factor loadings for *Privacy risk* are shown in Table 7.22.

TABLE 7.22

FACTOR STRUCTURE – PRIVACY RISK

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
PRIVACY RISK (PRIV)	PRIV1	I am concerned that people could access my personal information on Facebook	0.675
	PRIV4	I am concerned that Facebook could share my information with others outside of Facebook	0.712
	PRIV5	I am concerned that hackers might get to my personal information on Facebook	0.803
	PRIV6	I am concerned with the fact that my Facebook activity will be monitored by others	0.654

7.5.10 Psychological risk of users of Facebook

The disappointment or loss of ego associated with service failure when using technology is the operationalisation of *Psychological risk* (PSYC). Three of the six *Psychological risk* items loaded to a significant extent and two items of *Social risk,* SOC2 and SOC3 were thus regarded as measures of psychological risk. This made intuitive sense, seeing that *Psychological risk* and *Social risk* were both founded in the perceived opinions of others, whose opinion the individual valued. The *Social risk* items that did not load were PSYC1 (*I am concerned I could be "rated" based on my looks on Facebook*), PSYC2 (*I am concerned that Facebook could cause cliques within my circle of friends, which may harm my friendships),* PSYC5 (I believe that using Facebook may leave little time for real-world interaction, which could make me feel lonely), PSYC6 (*I am concerned that I could be discriminated against based on ethnic origin on Facebook*) and PSYC7 (I am concerned that I will be exposed to one

or more of the following on Facebook: cursing, swearing, expletives, bad words, dirty words, nasty words, cussing, blasphemy, obscene material, or indecent material). The *Psychological risk* loadings are presented in Table 7.23.

TABLE 7.23

FACTOR STRUCTURE – PSYCHOLOGICAL RISK

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
PSYCHOLOGICAL RISK (PSYC)	PSYC3	I am concerned with obscene pictures on Facebook	0.771
	SOC2	I am concerned that the time I spend on Facebook could reduce my real-world activities	0.674
	SOC3	I am concerned that the time I spend on Facebook could reduce my real-world activities	0.661

7.5.11 Perceived usefulness of Facebook for users of Facebook

The factor *Perceived usefulness* (PU) is operationalised as the belief an individual has that the use of technology will improve the user's efficiency. All *Perceived usefulness* items loaded as expected, except for PU4 (*Using Facebook significantly increases my ability to communicate online*). *Perceived usefulness* loadings are presented in Table 7.24.

TABLE 7.24

FACTOR STRUCTURE – PERCEIVED USEFULNESS

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
PERCEIVED USEFULNESS (PU)	PU1	I believe Facebook is useful to me in my job/academic work	0.680
	PU2	Using Facebook has a significant effect on the speed with which I am able to accomplish a job/academic tasks online	0.662
	PU5	Using Facebook gives me greater control over my job/academic work	0.786
	PU6	Using Facebook makes it easier to accomplish certain jobs or academic-related tasks	0.810

7.5.12 Susceptibility to norm influence of users of Facebook

Susceptibility to norm influence (SNI) refers to an individual's propensity to comply with the opinions and expectations of others whose opinion they value. *Susceptibility to norm influence* loaded to a significant extent on all items except for SNI2 (*People who are important to me think I should use Facebook*). The *Collective self-esteem* variable CSES6 also loaded on *Susceptibility to norm influence* and was thus regarded as a measure of *Susceptibility to norm influence*. Table 7.25 presents the exploratory factor analysis results for *Susceptibility to norm influence*.

TABLE 7.25

FACTOR STRUCTURE – SUSCEPTIBILITY TO NORM INFLUENCE

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
SUSCEPTIBILITY TO NORM INFLUENCE (SNI)	CSES6	In general, belonging to Facebook is important to my self-image	0.655
	SNI3	If other people can see me using a product, I often purchase the brand they expect me to buy	0.703
	SNI4	It is important that others like the products and brands I buy	0.795
	SNI5	I often identify with other people by purchasing the same products and brands they purchase	0.778
	SNI6	I like to know what brands and products make good impressions on others	0.701

7.5.13 Social risk of users of Facebook

As discussed earlier, *Social risk* (SOC) and *Psychological risk* are both based on the self-concept of individuals as reflected through the feedback from others and, therefore, the *Social risk* items SOC2 and SOC3 loaded on *Psychological risk*. None of the other *Social risk* items loaded to a significant extent on a distinct factor and, therefore, the factor, *Social risk*, was excluded from the final structural equation model, due to discriminant and construct validity concerns.

7.5.14 Continued intention to use of users of Facebook

All the dependent items used to measure *Continued intention* (ITO) *to use* Facebook loaded as expected, except ITO1 (In the future I intend to continue to use social networking sites), ITO7 (I use Facebook to stay in touch with my friends), ITO8 (I use Facebook to look at attractive graphics), ITO9 (I use Facebook so I can be part of a group) and ITO10 (I use Facebook to find profitable financial information, such as bargains). The loadings for *Continued intention to use* Facebook are illustrated in Table 7.26.

TABLE 7.26

FACTOR STRUCTURE – CONTINUED INTENTION TO USE

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
Continued intention to use (ITO)	ITO2	I use Facebook to find information	0.584
	ITO3	I use Facebook to post photos or other media	0.670
	ITO4	I use Facebook for entertainment	0.607
	ITO5	I use Facebook in order to share my expertise with the members of Facebook	0.779
	ITO6	I use Facebook to share my interests with more people	0.873

7.6 FACTORS INFLUENCING THE USAGE OF FACEBOOK FOR NON-USERS OF FACEBOOK

The factorability of the items influencing the usage of Facebook by non-users of Facebook was assessed in the same way as for the users of Facebook, in order to construct the final empirical model to be analysed, using structural equation modelling.

Table 7.27 presents the complete list of factor loadings for all items used to assess the *Intention to use* Facebook by non-users of Facebook, followed by a discussion of the factors and measurement items.

TABLE 7.27

FACTOR STRUCTURE FOR THE NON-USERS OF FACEBOOK

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8	Factor 9	Factor 10
DT1	**.832**	.000	.098	-.070	.026	-.050	.059	-.008	-.020	.074
DT2	**.830**	.069	-.032	.048	.012	.013	-.098	-.112	.014	-.002
DT3	**.737**	-.061	.005	.059	.028	.025	-.088	-.023	-.010	-.074
DT4	**.794**	-.008	-.052	-.019	-.006	-.038	.147	.131	.022	.021
EOU1	.038	**.561**	.015	-.092	.189	.028	-.153	.204	.025	-.025
EOU2	-.146	**.661**	.084	.225	.055	-.066	.057	.074	-.051	-.081
EOU3	-.074	**.783**	.219	-.005	.184	-.041	-.020	-.017	.026	.008
EOU4	-.042	**.850**	.241	-.024	.048	.024	.092	-.052	-.051	-.039
EOU5	.011	**.675**	-.136	.226	.078	.007	.106	.026	-.027	.004
EOU6	.027	**.818**	.054	-.018	-.017	.030	-.052	.000	.035	-.107
ISE6	.024	**.674**	.120	.221	-.077	.064	-.055	-.152	-.103	-.008
ISE2	-.062	.265	**.769**	.191	.083	-.006	-.019	-.066	-.077	.019
ISE3	.058	.127	**.685**	.132	-.052	.016	-.016	.013	-.142	-.016
ISE4	-.021	.028	**.658**	.025	-.088	-.059	.034	.106	-.100	-.081
ISE5	-.002	.324	**.744**	.146	-.116	.049	-.105	-.001	-.152	-.025
NFC2	-.059	.170	.081	**.767**	-.072	.029	-.108	.052	.003	-.027
NFC3	.044	-.031	.317	**.596**	.120	.100	-.046	.032	.074	.133
NFC4	.072	.200	.035	**.638**	.029	.052	.159	-.087	.019	-.115
CSES3	.062	-.122	.064	.039	**.752**	-.006	.023	.129	-.109	-.079
PE1	.067	.062	-.126	.084	**.762**	-.008	-.117	.100	-.081	.024
PE2	.063	.083	-.077	.074	**.830**	-.009	.001	.047	-.088	-.046
PE3	.026	-.016	.026	-.020	**.864**	-.026	.047	.053	-.042	-.083
PE4	.022	.016	.086	-.023	**.884**	.015	.056	-.027	.003	-.024
PE5	.038	.132	-.052	-.025	**.820**	.032	-.004	-.004	-.075	-.015
PE6	.072	.149	-.046	-.023	**.850**	.000	.030	.126	-.048	-.045
PU4	-.019	.236	.085	-.059	**.675**	.137	-.033	.065	-.107	-.170
PRIV3	-.016	-.016	.052	.056	.053	**.537**	.279	-.150	-.019	-.039
PSYC2	-.018	-.067	-.116	.168	-.127	**.600**	.022	-.035	-.235	-.037
PSYC3	-.095	.119	-.049	.081	.073	**.643**	.103	-.117	.063	.027
PRIV6	.026	.071	-.042	.002	-.014	-.047	**.698**	.082	-.007	.076
PSYC5	.029	.179	.455	-.156	.082	.007	**.613**	-.053	.020	-.340
PSYC6	.031	-.073	.685	.045	-.058	-.030	**.644**	-.114	.044	-.024
PSYC7	-.144	.090	.018	-.035	-.012	-.117	**.691**	.040	-.120	.023
SOC5	.018	-.031	.082	-.027	-.103	-.395	**.730**	-.043	-.053	-.124
PU1	-.001	.092	.009	-.016	.254	.021	-.065	**.668**	-.055	-.126
PU2	-.015	-.119	.047	.225	.170	-.056	-.188	**.589**	-.157	-.139
PU5	.080	-.033	.179	-.029	.215	-.026	.072	**.818**	-.131	-.076

PU6	.138	.169	.095	-.071	.127	.069	-.007	**.791**	-.048	-.221
SNI3	.006	-.039	.110	.019	.125	.127	-.050	-.070	**.708**	.037
SNI4	-.048	-.095	.136	-.035	.056	-.049	.083	.087	**.712**	.031
SNI5	.036	.126	.015	-.136	.001	.013	-.124	.061	**.737**	.014
SNI6	.053	.036	-.089	.071	.042	.077	.096	-.058	**.734**	-.123
ITO1	.072	-.120	.061	.022	.517	-.051	-.040	-.055	-.051	**.786**
ITO10	.093	-.001	-.042	.105	-.175	.049	.047	.239	-.029	**.667**
ITO2	.045	.047	.046	-.006	.052	.091	.078	.243	.027	**.556**
ITO3	.031	.098	.018	-.075	.231	-.086	-.057	-.151	-.009	**.721**
ITO4	.040	.029	.128	-.161	.504	.052	.036	-.165	.058	**.802**
ITO5	-.067	.099	.174	-.072	.111	.099	.012	.086	.068	**.829**
ITO6	-.088	.106	.049	-.013	.060	-.055	-.108	-.013	-.057	**.842**
ITO7	.024	.092	-.014	-.074	.308	-.046	-.155	-.160	-.113	**.846**
ITO8	.112	-.075	.060	.057	.113	-.043	.028	.047	-.012	**.762**
ITO9	.074	-.015	-.124	.051	.049	-.021	-.003	-.074	-.199	**.725**

The items used in the questionnaire for non-users of Facebook were the same as for the users of Facebook in order to enable direct comparisons between the two groups. The operationalisation of the factors influencing Facebook was the same for both users and non-users of Facebook and will not be repeated; only the factor loadings will be provided and the items that did load will be listed.

7.6.1 Collective self-esteem of non-users of Facebook

All the items used to measure the latent variable *Collective self-esteem* (CSES) did not load to a significant extent, except for CSES3 that loaded on *Perceived enjoyment*. Due to this evidence of poor discriminant and construct validity, the latent variable *Collective self-esteem* was not included in the final empirical model.

7.6.2 Dispositional trust of non-users of Facebook

Dispositional trust (DT) loaded significantly on all items, except for DT5 (*People usually try to cooperate with others*). The loadings for *Dispositional trust* are presented in Table 7.28.

TABLE 7.28

FACTOR STRUCTURE – DISPOSITIONAL TRUST OF NON-USERS

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
DISPOSITIONAL TRUST (DT)	DT1	Most people can be trusted	0.832
	DT2	Most people try to be fair	0.830
	DT3	Most of the time people try to be helpful	0.737
	DT4	People mostly tell the truth	0.794

7.6.3 Perceived ease of use of non-users of Facebook

Perceived ease of use (EOU) loaded to a significant degree on all items, as presented in Table 7.29.

TABLE 7.29

FACTOR STRUCTURE – PERCEIVED EASE OF USE OF NON-USERS

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
PERCEIVED EASE OF USE (EOU)	EOU1	Interaction with Facebook is simple	0.561
	EOU2	It took little effort for me to become skilful at using Facebook	0.661
	EOU3	I find Facebook easy to use	0.783
	EOU4	Learning to navigate Facebook was easy for me	0.850
	EOU6	It is easy to understand how to use Facebook	0.818
	ISE6	I am comfortable using the Internet and feel no anxiety while using it	0.674

7.6.4 Interpersonal trust of non-users of Facebook

Interpersonal trust (IPT) was found to display poor discriminant and construct validity and was, therefore, not included in the final model.

7.6.5 Internet self-efficacy of non-users of Facebook

Internet self-efficacy (ISE) loaded significantly on all items except for ISE6 (*I am comfortable using the Internet and feel no anxiety while using it*). Table 7.30 shows the factor loadings for *Internet self-efficacy*.

TABLE 7.30

FACTOR STRUCTURE – INTERNET SELF-EFFICACY OF NON-USERS

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
INTERNET SELF-EFFICACY (ISE)	ISE2	I feel confident understanding terms/words related to Internet software	0.769
	ISE3	I feel confident troubleshooting Internet problems	0.685
	ISE4	I feel confident explaining why a programme will not run on the Internet	0.658
	ISE5	I feel confident learning advanced skills within a specific Internet programme	0.744

7.6.6 Need for cognition of non-users of Facebook

Three of the six items representing *Need for cognition* (NFC) loaded to a significant extent, with NFC5 (*I really enjoy a task that involves finding new solutions to problems*), NFC6 (*The notion of thinking "out of the box" is appealing to me*) and NFC7 (*I feel satisfaction after completing a task that required a lot of mental effort*) not loading as expected, as presented in Table 7.31.

TABLE 7.31

FACTOR STRUCTURE – NEED FOR COGNITION OF NON-USERS

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
NEED FOR COGNITION (NFC)	NFC2	I like to have the responsibility of handling a situation that requires a lot of thinking	0.767
	NFC3	I enjoy thinking hard and for long hours	0.596
	NFC5	I really enjoy a task that involves finding new solutions to problems	0.638

7.6.7 Need to belong of non-users of Facebook

Need to belong (NTB) was found to display poor discriminant and construct validity and was, therefore, excluded from the final model.

7.6.8 Perceived enjoyment of non-users of Facebook

In addition to all the *Perceived enjoyment* (PE) items, CSES3 (*I feel that belonging to Facebook would be worth my while*) and PU4 (*Using Facebook could significantly increase my ability to communicate online*) loaded significantly on *Perceived enjoyment* and were, therefore, regarded as items of *Perceived enjoyment,* as illustrated in Table 7.32.

TABLE 7.32

FACTOR STRUCTURE – PERCEIVED ENJOYMENT OF NON-USERS

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
PERCEIVED ENJOYMENT (PE)	CSES3	Overall, I feel that belonging to Facebook is worth my while	0.752
	PE1	Using Facebook is entertaining	0.762
	PE2	I find Facebook pleasant to use	0.830
	PE3	Participating in Facebook is exciting	0.864
	PE4	Facebook is fun to use	0.884
	PE5	Participating in Facebook is enjoyable	0.820
	PE6	I believe that participating in Facebook would be pleasurable	0.850
	PU4	Using Facebook has a significant effect on the speed with which I am able to accomplish certain jobs/academic tasks online	0.675

7.6.9 Privacy risk of non-users of Facebook

The *Privacy risk* items PRIV1 (*I am concerned that people could access my personal information on Facebook*), PRIV2 (Facebook do not respect their users' personal information), PRIV4 (*I am concerned that Facebook could share my information with others outside of Facebook*) and PRIV5 *(I am concerned that hackers might get to my personal information on Facebook*) did not load to a significant extent on *Privacy risk*. The psychological items PSYC2 (*I am concerned that Facebook could cause cliques within my circle of friends, which may harm my friendships*) and PSYC3 (*I am concerned with obscene pictures on Facebook*) did load significantly on *Privacy risk* and were, therefore, regarded as additional items measuring *Privacy risk* of non-users of Facebook, as can be seen in Table 7.33.

TABLE 7.33

FACTOR STRUCTURE – PRIVACY RISK OF NON-USERS

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
	PRIV3	I am concerned with some of the aspects I read in the privacy statement of Facebook	0.537
	PSYC2	I am concerned that Facebook could cause cliques within my circle of friends, which may harm my friendships	0.600
	PSYC3	I am concerned with obscene pictures on Facebook	0.643

7.6.10 Psychological risk of non-users of Facebook

The *Psychological risk* item PSYC1 (*I am concerned I could be "rated" based on my looks on Facebook*) did not load significantly on *Psychological risk*, with PSYC2 and PSYC3 loading to a significant extent on *Privacy risk*. Additionally, SOC5 *(I am concerned I could be humiliated by someone on Facebook as part of an initiation*) also loaded significantly on *Psychological risk* and were, therefore, included as items of the *Psychological risk* variable. The factor loadings for *Psychological risk* are presented in Table 7.34.

TABLE 7.34

FACTOR STRUCTURE – PSYCHOLOGICAL RISK OF NON-USERS

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
PSYCHOLOGICAL RISK (PSYC)	PRIV6	I am concerned with the fact that my Facebook activity will be monitored by others	0.698
	PSYC5	I believe that using Facebook may leave little time for real-world interaction, which could make me feel lonely	0.613
	PSYC6	I am concerned that I could be discriminated against based on ethnic origin on Facebook	0.644
	PSYC7	I am concerned that I will be exposed to one or more of the following on Facebook: cursing, swearing, expletives, bad words, dirty words, nasty words, cursing, blasphemy, obscene material, or indecent material	0.691
	SOC5	I am concerned I could be humiliated by someone on Facebook as part of an initiation	0.730

7.6.11 Perceived usefulness of non-users of Facebook

Table 7.35 shows the factor loadings for *Perceived usefulness* (PE) and indicates that all *Perceived usefulness* items loaded to a significant extent, except for PU4 (*Using Facebook could significantly increase my ability to communicate online*).

TABLE 7.35

FACTOR STRUCTURE – PERCEIVED USEFULNESS OF NON-USERS

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
PERCEIVED USEFULNESS (PU)	PU1	I believe Facebook is useful to me in my job/academic work	0.668
	PU2	Using Facebook has a significant effect on the speed with which I am able to accomplish certain jobs/academic tasks online	0.589
	PU5	Using Facebook gives me greater control over my job/academic work	0.818
	PU6	Using Facebook makes it easier to accomplish certain jobs or academic-related tasks	0.791

7.6.12 Susceptibility to norm influence of non-users of Facebook

All social norm influence (SNI) items loaded significantly, except for NTB5 (*It bothers me a great deal when I am not included in other people's plans*), as presented in Table 7.36.

TABLE 7.36

FACTOR STRUCTURE – SUSCEPTIBILITY TO NORM INFLUENCE OF NON-USERS

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
	SNI3	If other people can see me using a product, I often purchase the brand they expect me to buy	0.708
	SNI4	It is important that others like the products and brands I buy	0.712
	SNI5	I often identify with other people by purchasing the same products and brands they purchase	0.737
	SNI6	I like to know what brands and products make good impressions on others	0.734

7.6.13 Social risk of non-users of Facebook

The only *Social risk* (SOC) variable that loaded significantly was SOC5, which loaded on *Psychological risk*. *Social risk* was, therefore, excluded from the model for analysis, because it did not display sufficient discriminant and construct validity.

7.6.14 Intention to use of non-users of Facebook

All the dependent items of *Intention to use* (ITO) Facebook loaded significantly, as presented in Table 7.37.

TABLE 7.37

FACTOR STRUCTURE – NON USERS' INTENTION TO USE

Factors (latent variables)	Item codes	Measurement items (manifest variables)	Item loadings
CONTINUED INTENTION TO USE (ITO)	ITO1	In the future I intend to continue to use social networking sites	0.786
	ITO2	I use Facebook to find information	0.556
	ITO3	I use Facebook to post photos or other media	0.721
	ITO4	I use Facebook for entertainment	0.802
	ITO5	I use Facebook in order to share my expertise with the members of Facebook	0.829
	ITO6	I use Facebook to share my interests with more people	0.842
	ITO7	I use Facebook to stay in touch with my friends	0.846
	ITO8	I use Facebook to look at attractive graphics	0.762
	ITO9	I use Facebook so I can be part of a group	0.725
	ITO10	I use Facebook to find profitable financial information, such as bargains	0.667

7.7 TESTS FOR THE NORMALITY OF DATA

It is important to test for the normality of the data used in the study, considering that the structural equation modelling estimation technique is dependent on the distribution properties of the sample data. If the data showed evidence of normal distribution, the Maximum Likelihood Estimation (MLE) was the appropriate technique to be used for the structural equation modelling. If, on the other hand, the

data were not normally distributed, then the Robust Maximum Likelihood (RML) was recommended to be used to estimate the parameters (Satorra & Bentler, 1994).

The normality of the sample data was analysed, using both univariate and multivariate normality.

7.7.1 Assessment of the univariate normality of data for the users of Facebook

The Shapiro-Wilk numerical technique for testing for univariate normality is regarded as most appropriate for sample sizes between 50 and 2 000 respondents. The Shapiro-Wilk test is more appropriate for small sample sizes (< 50 samples), but can also handle sample sizes as large as 2 000. For this reason, the Shapiro-Wilk test was used as numerical means of assessing univariate normality. The following hypotheses were formulated to assess the univariate normality of the data for users of Facebook:

H_{01}: The data are univariate normally distributed

H_{a1}: The data are not univariate normally distributed

The null hypothesis states that the data are normally distributed and the hypothesis is accepted if the significance level of the Shapiro-Wilk test is > 0.05. If the Shapiro-Wilk test result is significant ($p<0.05$), the null hypothesis is rejected and the alternative hypothesis accepted, which assumes that the sample data are not normally distributed. The results for the Shapiro-Wilk test for the variables used in the study for non-users of Facebook are listed in Table 7.38.

TABLE 7.38

TEST OF THE UNIVARIATE NORMALITY OF DATA FOR USERS OF FACEBOOK

	Shapiro-Wilk		
Variable	**Statistic**	**df**	**Sig.**
CSES6	.901	307	.000
DT1	.937	307	.000
DT2	.947	307	.000
DT3	.937	307	.000

DT4	.947	307	.000
DT5	.938	307	.000
EOU1	.833	307	.000
EOU3	.804	307	.000
EOU4	.858	307	.000
EOU6	.852	307	.000
ISE3	.936	307	.000
ISE4	.937	307	.000
ISE5	.919	307	.000
ITO1	.800	307	.000
ITO10	.868	307	.000
ITO2	.916	307	.000
ITO3	.843	307	.000
ITO4	.871	307	.000
ITO5	.927	307	.000
ITO6	.892	307	.000
ITO7	.759	307	.000
ITO8	.919	307	.000
ITO9	.913	307	.000
NFC2	.905	307	.000
NFC3	.943	307	.000
NFC5	.893	307	.000
PE1	.842	307	.000
PE2	.851	307	.000
PE3	.911	307	.000
PE4	.876	307	.000
PE5	.868	307	.000
PE6	.877	307	.000
PRIV1	.920	307	.000
PRIV2	.941	307	.000
PRIV4	.937	307	.000
PRIV5	.917	307	.000
PRIV6	.933	307	.000
PSYC3	.926	307	.000
PSYC5	.904	307	.000
PSYC7	.916	307	.000

PU1	.933	307	.000
PU2	.936	307	.000
PU5	.923	307	.000
PU6	.932	307	.000
SES1	.778	307	.000
SES2	.838	307	.000
SES4	.813	307	.000
SES5	.807	307	.000
SES6	.865	307	.000
SNI3	.901	307	.000
SNI4	.865	307	.000
SNI5	.903	307	.000
SNI6	.914	307	.000
SOC2	.933	307	.000

The significance of all items was < 0.05, therefore, the null hypothesis ($H_0$1) was rejected. This indicates that the data were not normally distributed and, therefore, the Robust Maximum Likelihood (RML) estimation technique was used conducting the structural equation modelling (Kucuk, 2009: 330).

7.7.2 Assessment of the multivariate normality of data for the users of Facebook

The following null hypothesis and alternative hypothesis were formulated to assess the multivariate normality of the data for users of Facebook:

H_02: The data are multivariate normally distributed

H_a2: The data are not multivariate normally distributed

The multivariate normality was assessed by examining the skewness and kurtosis of the data, using the Chi-square to determine the p-value. The skewness and kurtosis value of 7221.264 with a p-value of 0.000 indicates that the data were not normally distributed. The null hypothesis was, therefore, rejected and the alternative hypothesis was accepted ($p<0.01$); therefore, Robust Maximum Likelihood estimates were used for the structural equation modelling estimation (Tabachnick & Fidell, 2001: 683).

7.7.3 Assessment of the univariate normality of data for the non-users of Facebook

The following null hypothesis and alternative hypothesis were formulated to assess the univariate normality of the data for non-users of Facebook:

H_{03}: The data are univariate normally distributed

H_{a3}: The data are not univariate normally distributed

The results for the Shapiro-Wilk test for the items used in the study for non-users of Facebook are shown in Table 7.39.

TABLE 7.39

TEST OF THE NORMALITY OF DATA FOR NON-USERS OF FACEBOOK

	Shapiro-Wilk		
Variable	**Statistic**	**df**	**Sig.**
CSES3	.927	334	.000
DT1	.937	334	.000
DT2	.938	334	.000
DT3	.942	334	.000
DT4	.935	334	.000
DT5	.942	334	.000
EOU1	.928	334	.000
EOU2	.924	334	.000
EOU3	.923	334	.000
EOU4	.924	334	.000
EOU5	.937	334	.000
EOU6	.915	334	.000
ISE1	.932	334	.000
ISE2	.934	334	.000
ISE3	.941	334	.000
ISE4	.944	334	.000
ISE5	.937	334	.000
ISE6	.914	334	.000
ITO1	.911	334	.000
ITO10	.909	334	.000

ITO2	.924	334	.000
ITO3	.907	334	.000
ITO4	.906	334	.000
ITO5	.922	334	.000
ITO6	.918	334	.000
ITO7	.870	334	.000
ITO8	.924	334	.000
ITO9	.906	334	.000
NFC2	.929	334	.000
NFC3	.944	334	.000
NFC4	.928	334	.000
NTB5	.929	334	.000
PE1	.901	334	.000
PE2	.911	334	.000
PE3	.912	334	.000
PE4	.913	334	.000
PE5	.915	334	.000
PE6	.917	334	.000
PRIV2	.933	334	.000
PRIV3	.902	334	.000
PRIV6	.938	334	.000
PSYC2	.947	334	.000
PSYC3	.923	334	.000
PSYC5	.936	334	.000
PSYC6	.931	334	.000
PSYC7	.933	334	.000
PU1	.922	334	.000
PU2	.939	334	.000
PU4	.919	334	.000
PU5	.926	334	.000
PU6	.940	334	.000
SES1	.852	334	.000
SES2	.841	334	.000
SES3	.895	334	.000
SES4	.864	334	.000
SES5	.848	334	.000

SES6	.862	334	.000
SNI3	.913	334	.000
SNI4	.922	334	.000
SNI5	.928	334	.000
SNI6	.939	334	.000
SOC5	.933	334	.000

All the items of the data for the non-users of Facebook had a significance level of < 0.05, indicating that the data for the non-users were also not univariate normally distributed.

7.7.4 Assessment of the multivariate normality of data for the non-users of Facebook

The null hypothesis and alternative hypothesis to assess the multivariate normality of the data for non-users of Facebook were:

H_{04}: The data are multivariate normally distributed

H_{a4}: The data are not multivariate normally distributed

The skewness and kurtosis of the data were examined, using the Chi-square to determine the p-value to assess the multivariate normality of the data for the non-users of Facebook. The value of 4890.406 for skewness and kurtosis with a p-value of 0.000 indicates that the data were not normally distributed. The alternative hypothesis was, therefore, accepted ($p<0.01$) (Tabachnick & Fidell, 2001: 683) and, therefore, Robust Maximum Likelihood estimates were also used for the structural equation modelling for non-users of Facebook.

7.8 RESULTS OF THE STRUCTURAL EQUATION MODELLING

In Chapter 6, the six stages of the decision process for the structural equation modelling procedure (SEM), as identified by Hair *et al.* (2010: 627), were discussed. These six stages were taken into account to present the results of the structural equation model used in the current study:

Stage I: Defining individual constructs

Stage II: Developing the overall measurement model

Stage III: Designing a study to produce empirical results

Stage IV: Assessing the measurement model validity

Stage V: Specifying the structural model

Stage VI: Assessing the structural model validity

7.8.1 Stage I: Defining the individual constructs

The first stage in the structural modelling, namely defining the individual manifest variables and latent variables to be used in the structural equation modelling, was discussed and operationalised in Chapters 5 and 6.

7.8.2 Stage II: Specifying the overall measurement model

The decomposed Theory of Planned Behaviour model (illustrated in Figure 5.1) contained too many factors and, therefore, became too complex to be meaningfully analysed in a single structural equation model. The complexity of the expanded theory would have violated the accepted norm of items/parameters norms. A number of authors, including Ardichvili (2008: 550) and Ridings *et al.* (2006: 332) divide the constructs that determine user acceptance into two categories, namely motivators and barriers to users' *Intention to use* social network sites. The factors comprising the expanded Theory of Planned Behaviour model (mentioned above) for both the users and non-users of Facebook were, therefore, further divided into *motivators* for using Facebook and *barriers* to using Facebook. Based on this additional classification, four distinct groups of factors were identified, namely: barriers to Facebook use among Facebook users (referred to as the Facebook users barriers model), motivators of Facebook use among Facebook users (referred to as the Facebook users motivators model), barriers of Facebook use among non-users of Facebook (referred to as the Facebook non-users barriers model); and motivators to Facebook use among non-users of Facebook (referred to as the Facebook non-users motivators model).

A visual representation of these four measurement models is presented in Figures 7.1, 7.2, 7.3 and 7.4.

FIGURE 7.1

FACEBOOK USERS: BARRIERS MODEL

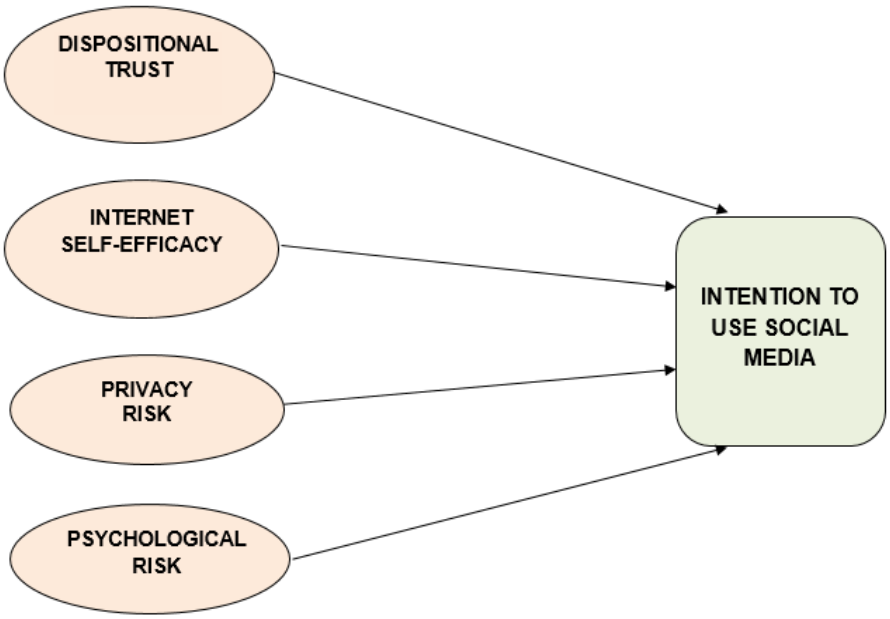


FIGURE 7.2

FACEBOOK USERS: MOTIVATORS MODEL

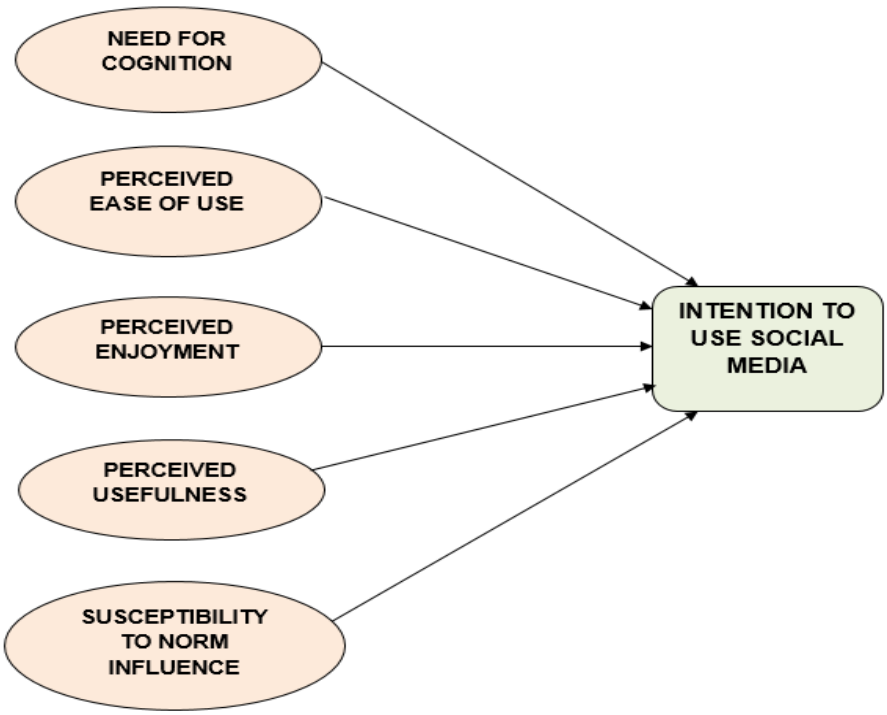


FIGURE 7.3

FACEBOOK NON-USERS: BARRIERS MODEL

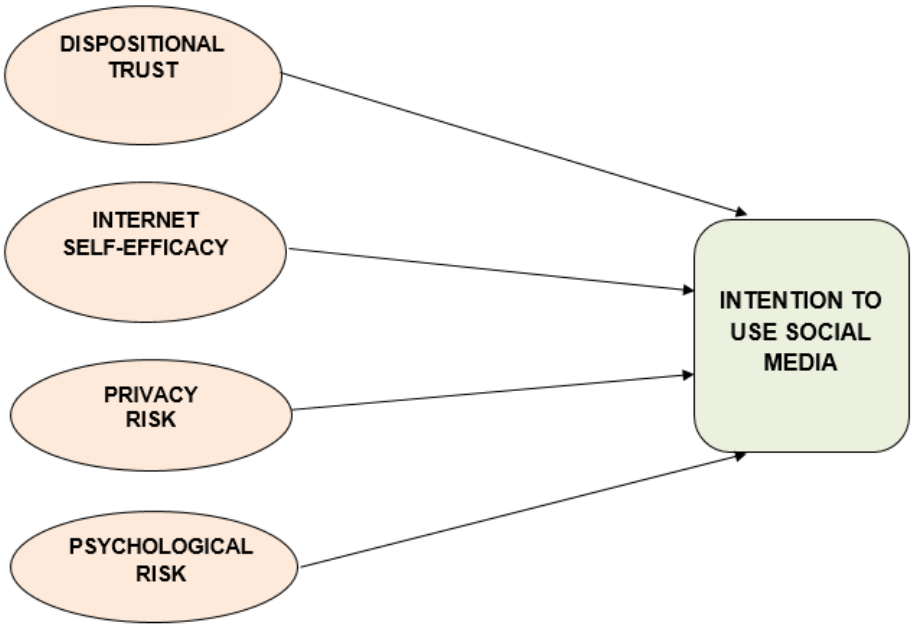
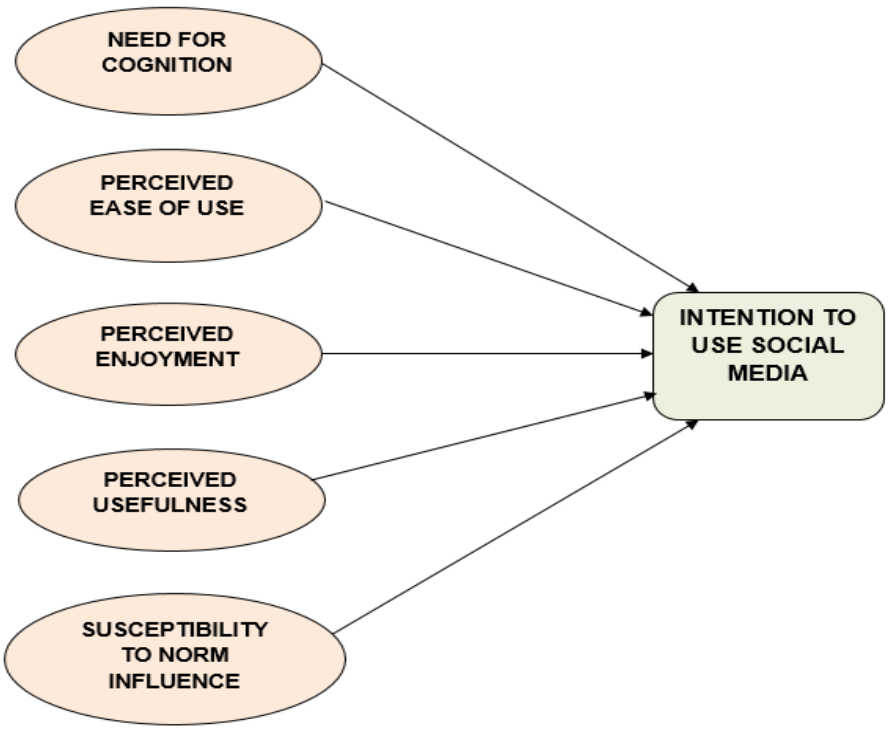


FIGURE 7.4

FACEBOOK NON-USERS: MOTIVATORS MODEL



7.8.3 Stage lll: Designing a study to produce empirical results

As explained in Chapter 6, Hair *et al.* (2010: 631) suggest that specific design and estimation issues need to be considered before structural equation modelling can be conducted. For this study, co-variances were used; only completed surveys without missing data were included, and Lisrel 8.8 was used to analyse the data.

7.8.4 Stage lV : Assessing the measurement model validity

7.8.4.1 Assessing the construct validity of the measurement models for users of Facebook

Based on the guidelines provided by Hair, Black, Babin, Anderson and Tatham (2006: 645), the following goodness-of-fit indices were used to measure the construct validity of the measurement model for the four groups of factors: the comparative fit index (CFI), the absolute index and badness-of-fit index and the Root mean square error of approximation (RMSEA). Lastly, the Satorra-Bentler scaled Chi-square index and associated p-value and degrees of freedom were used. A summary of the guidelines proposed to assess the fit indices (Hair *et al.*, 2010: 480) is provided in Table 7.40.

TABLE 7.40

MODEL FIT ASSESSMENT RECOMMENDATIONS

Fit measure	Close fit	Reasonable fit
CFI	$0.95 \leq CFI \leq 1$	$0.90 \leq CFI < 0.95$
RMSEA	$0 < RMSEA \leq 0.05$	$0.05 < RMSEA \leq 0.08$
Satorra-Bentler scaled Chi-square (x^2/ degrees of freedom)	$0 < x^2/df \leq 2$	$2 < x^2/df \leq 3$

In addition to these assessment recommendations, the following hypotheses were formulated to assess the goodness-of-fit of the four sub-models:

H_0: The data fit the model perfectly

H_1: The data do not fit the model perfectly

7.8.4.1.a Structural validity of the measurement model for the Facebook users barriers model

The indices showed a close goodness-of-fit with a RMSEA of 0.0220 and CFI of 0.994, which were both better than the recommended values for RMSEA < 0.05 and for CFI > 0.95. The x^2/df score (183.591/160) of 1.147, was less than 2 and, therefore, also indicated a close fit. The null hypothesis (H_0) that the data fit the model perfectly, was rejected, however, the goodness–of-fit indices did indicate a close fit for the users barriers model. The indices of the goodness-of-fit for the final model of the Facebook users barriers model are summarised in Table 7.41.

TABLE 7.41

GOODNESS-OF-FIT INDICES FOR THE MEASUREMENT MODEL OF THE FACEBOOK USERS BARRIERS MODEL

Fit indices	Index
CFI	0.994
RMSEA	0.022
df	160
Satorra-Bentler scaled chi-square (x^2)	183.59
x^2/df	1.147

7.8.4.1.b Structural validity of the measurement model for the Facebook users motivators model

The Facebook users motivators model goodness-of-fit, as summarised in Table 7.42, showed a close goodness-of-fit with a RMSEA of 0.0481 and CFI of 0.979, which were both better than the recommended values of RMSEA < 0.05 and CFI > 0.95. The x^2/df (527.355/309) of 1.707 (less than 2) also indicated a close fit. The null hypothesis of a perfect model fit was, therefore, rejected, but the indices did show a close fit between the model and the data.

TABLE 7.42

GOODNESS-OF-FIT INDICES FOR THE MEASUREMENT MODEL OF THE FACEBOOK USERS MOTIVATORS MODEL

Fit indices	Index
CFI	0.979
RMSEA	0.0481
df	309
Satorra-Bentler scaled Chi-square (x^2)	527.355
x^2/df	1.707

7.8.4.2 Assessment of the measurement model of the non-users of Facebook

7.8.4.2.a Structural validity of the measurement model for the non-users of Facebook barriers model

The indices for the non-users of the Facebook barriers model illustrated in Table 7.43, showed a reasonable fit, with a RMSEA of 0.0512, a CFI of 0.971 and Satorra-Bentler/df (335.083/179) ratio of 1.872. The RMSEA score of 0.0512 were slightly higher than 0.05, but with the remaining scores all better than the recommended values of CFI > 0.95 and the Satorra-Bentler scaled Chi-square/df ratio of < 2, the indices did indicate a reasonable fit overall. The null hypothesis (H_0) of a perfect fit was rejected, but based on the indices the data displayed a close fit with data of the Facebook non-users barriers model. Therefore, the model showed a close fit.

TABLE 7.43

GOODNESS-OF-FIT INDICES FOR THE MEASUREMENT MODEL OF THE FACEBOOK NON-USERS BARRIERS MODEL

Fit indices	Index
CFI	0.971
RMSEA	0.0512
df	179
Satorra-Bentler scaled chi-square (x^2)	335.083
x^2/df	1.872

7.8.4.2.b Structural validity of the measurement model for non-users of the Facebook motivators model

Table 7.44 summarises the indices of the goodness-of-fit of the non-users of the Facebook motivators model. It showed a reasonably close fit, with a RMSEA of 0.0547 and close for the indices: CFI of 0.980 and Satorra-Bentler/df (1155.952/579) ratio of 1.996 (Recommended values for a close fit: RMSEA values < 0.08 for a reasonable fit, CFI > 0.95 and Satorra-Bentler scaled Chi-square/df ratio of < 2). The null hypothesis H_0, that the data fit the data perfectly, was rejected. The RMSEA only displayed a reasonable fit (very close to the close fit of 0,05), however, with all the other goodness-of-fit indices indicating a close fit, the data for the non-users motivators model was regarded as displaying a close fit.

TABLE 7.44

GOODNESS-OF-FIT INDICES FOR THE MEASUREMENT MODEL OF THE FACEBOOK NON-USERS MOTIVATORS MODEL

Fit indices	Index
CFI	0.980
RMSEA	0.0547
df	579
Satorra-Bentler scaled Chi-square (x^2)	1155.952
x^2/df	1.996

7.8.4.3 Construct validity and reliability for users of Facebook

The measurement items of specific variables should share a high common proportion of variance or convergent validity. In order to test for convergent validity of the items and factors, the factor loadings and average variance extracted (AVE) were examined. The average variance extracted is the average of the squared correlations (factor loadings) and is the average amount of variation that a latent construct can explain in the related theoretical model.

To test for internal consistency (reliability), Cronbach's alphas were used. The summary of the measures in Table 7.45 shows that all factor loadings were > 0.5 and Cronbach's alphas were all > 0.7, except for *Need for cognition* (NFC) with a score of 0.681, which was close to the reliability decision rule of 0.7 (Hair *et al.*, 2010: 124). The average variance extracted, however, showed that the five factors, namely *Dispositional trust*, *Perceived ease of use*, *Perceived enjoyment*, *Perceived usefulness* and *Susceptibility to norm influence* explained the variance of more than 50% or 0.5 and five factors, namely *Internet self-efficacy*, *Need for cognition*, *Privacy risk*, *Psychological risk* and *Continued intention to use Social networks* had less than 50% or 0.5, which meant those factors explained at less than half of the variation in the item. The factors with an AVE of less than 50% or 0.5 did not display sufficient convergent validity and were, therefore, excluded from the final empirical model.

TABLE 7.45

RESULTS OF THE PRELIMINARY TEST FOR RELIABILITY AND VALIDITY FOR USERS OF FACEBOOK

Factors (latent variables)	Item codes	Item loadings	Cronbach's alpha	Average variance extracted (AVE)
Dispositional trust (DT)	DT1	0.845	0.891	0.680
	DT2	0.909		
	DT3	0.775		
	DT4	0.761		
Perceived ease of use (EOU)	EOU1	0.643	0.834	0.565
	EOU3	0.789		
	EOU4	0.754		
	EOU6	0.810		
Internet self-efficacy (ISE)	ISE3	0.752	0.742	0.492
	ISE4	0.704		
	ISE5	0.644		
Need for cognition (NFC)	NFC2	0.660	0.681	0.418
	NFC3	0.622		
	NFC5	0.656		
Perceived enjoyment (PE)	PE1	0.784	0.908	0.628
	PE2	0.760		
	PE3	0.775		
	PE4	0.839		
	PE5	0.850		
	PE6	0.740		
Privacy risk (PRIV)	PRIV1	0.678	0.794	0.446
	PRIV2	0.445		
	PRIV4	0.719		
	PRIV5	0.791		
	PRIV6	0.657		
Psychological risk (PSYC)	PSYC3	0.749	0.782	0.427
	PSYC5	0.532		
	PSYC7	0.630		
	SOC2	0.665		
	SOC3	0.673		
Perceived usefulness (PU)	PU1	0.680	0.824	0.544
	PU2	0.662		
	PU5	0.786		
	PU6	0.810		
Susceptibility to norm influence (SNI)	CSES6	0.655	0.845	0.530
	SNI3	0.703		
	SNI4	0.795		
	SNI5	0.778		
	SNI6	0.701		

Continued intention to use (ITO)	ITO1	0.519	0.856	0.383
	ITO2	0.635		
	ITO3	0.685		
	ITO4	0.663		
	ITO5	0.715		
	ITO6	0.803		
	ITO7	0.499		
	ITO8	0.544		
	ITO9	0.512		
	ITO10	0.531		

7.8.4.3.a Inspection of modification indices of the test for reliability and validity of the Facebook users model

After performing the preliminary confirmatory factor analysis, the modification indices were analysed and the items of the same factor with large modification index values were removed in order to improve the model fit. The items that did not load significantly and, therefore, were removed from the final empirical model were: PRIV2, PSYC5, ITO1, ITO7 ITO8 ITO9 and ITO10. The remaining items that formed part of the final model for the users of Facebook are represented in Table 7.46. The average variance extracted for the final model showed that the seven factors, namely *Dispositional trust*, *Perceived ease of use*, *Perceived enjoyment*, *Privacy risk*, *Perceived usefulness*, *Susceptibility to norm influence* and *Continued intention to use* had explained variance of more than 50% or 0.5, and three factors, namely *Internet self-efficacy*, *Need for cognition* and *Psychological risk* had less than 50% explained variance. The average variance extracted for *Internet self-efficacy* and *Psychological risk* came close to explaining 50% of the variance (49.2% and 49.8% respectively). The high and statistically significant factor loadings provided evidence of convergent validity and, therefore, also of construct validity.

TABLE 7.46

RESULTS OF THE TEST FOR RELIABILITY AND VALIDITY OF THE FINAL MODEL FOR USERS OF FACEBOOK

Factors (latent variables)	Item codes	Item loadings	Cronbach's alpha	Average variance extracted (AVE)
Dispositional trust (DT)	DT1	0.845	0.891	0.680
	DT2	0.909		
	DT3	0.775		
	DT4	0.761		
Ease of use (EOU)	EOU1	0.643	0.834	0.565
	EOU3	0.789		
	EOU4	0.754		
	EOU6	0.810		
Internet self-efficacy (ISE)	ISE3	0.752	0.742	0.492
	ISE4	0.704		
	ISE5	0.644		
Need for cognition (NFC)	NFC2	0.660	0.681	0.418
	NFC3	0.622		
	NFC5	0.656		
Perceived enjoyment (PE)	PE1	0.784	0.908	0.637
	PE2	0.760		
	PE3	0.775		
	PE4	0.839		
	PE5	0.850		
	PE6	0.740		
Privacy risk (PRIV)	PRIV1	0.675	0.803	0.563
	PRIV4	0.712		
	PRIV5	0.803		
	PRIV6	0.654		
Psychological risk (PSYC)	PSYC3	0.771	0.829	0.498
	SOC2	0.674		
	SOC3	0.661		
Perceived usefulness (PU)	PU1	0.680	0.824	0.544
	PU2	0.662		
	PU5	0.786		
	PU6	0.810		
Susceptibility to norm influence (SNI)	CSES6	0.655	0.845	0.530
	SNI3	0.703		
	SNI4	0.795		
	SNI5	0.778		
	SNI6	0.701		
Continued intention to use (ITO)	ITO2	0.584	0.829	0.505
	ITO3	0.670		
	ITO4	0.607		
	ITO5	0.779		
	ITO6	0.873		

7.8.4.3.b Average variance extracted compared to squared correlations for barriers of the Facebook users model

An additional test for the discriminant validity is to compare the average variance extracted for each construct to the squared correlations for each pair of constructs (Fornell & Larcker, 1981: 123). Table 7.47 presents a summary of this comparison for the Facebook users barriers model. The results for the barriers of Facebook users indicated that the average variances extracted for each pair of constructs were greater than the squared correlations and, therefore, provided evidence of discriminant validity (Fornell & Larcker, 1981: 123).

TABLE 7.47

AVERAGE VARIANCE EXTRACTED COMPARED WITH SQUARED CORRELATIONS FOR THE FACEBOOK USERS BARRIERS MODEL

	Dispositional trust	Internet self-efficacy	Privacy Risk	Psychological Risk
Dispositional trust	**0.680**			
Internet self-efficacy	0.036	**0.492**		
Privacy Risk	0.063	0.017	**0.563**	
Psychological Risk	0.048	0.006	0.513	**0.495**

Note: AVE in bold and squared correlations below the diagonal

7.8.4.3.c Average variance extracted compared to squared correlations for the Facebook users motivators model

Table 7.48 presents a summary of the average variance extracted compared to the squared correlations for the Facebook users motivators model. The results for the motivators of Facebook users indicated sufficient evidence of discriminant validity, with the average variances extracted for each pair of constructs being greater than the squared correlations (Fornell & Larcker, 1981: 123).

TABLE 7.48

AVERAGE VARIANCE EXTRACTED COMPARED WITH SQUARED CORRELATIONS FOR THE FACEBOOK USERS MOTIVATORS MODEL

	Ease of use	Need for cognition	Perceived Enjoyment	Perceived usefulness	Susceptibility to norm influence
Ease of use	**0.565**				
Need for cognition	0.086	**0.418**			
Perceived Enjoyment	0.350	0.009	**0.637**		
Perceived usefulness	0.022	0.001	0.236	**0.544**	
Susceptibility to norm influence	0.000	0.000	0.112	0.399	**0.530**

Note: AVE in bold and squared correlations below the diagonal

7.8.4.4 Construct reliability and validity for the non-users of Facebook model

The summary of the measures for non-users of Facebook is presented in Table 7.49 and shows that all factor loadings were > 0.5 and Cronbach's alphas were all greater than the reliability decision rule-of-thumb of 0.7. The average variance extracted, however, shows that only six factors, namely *Dispositional trust*, *Ease of use*, *Internet Self-efficacy, Perceived enjoyment*, *Perceived usefulness* and *Continued intention to use* explained variance of more than 50% or 0.5, and four factors, namely *Need for cognition*, *Privacy risk*, *Psychological risk* and *Susceptibility to norm influence* had less than 50% explained variance.

TABLE 7.49

RESULTS OF THE PRELIMINARY TEST FOR RELIABILITY AND VALIDITY FOR FACEBOOK NON-USERS

Factors (latent variables)	Code	Measurement items	Cronbach's alpha	Average variance extracted
Dispositional trust (DT)	DT1	0.832	0.873	0.639
	DT2	0.830		
	DT3	0.737		
	DT4	0.794		
Ease of use (EOU)	EOU1	0.561	0.878	0.524
	EOU2	0.661		
	EOU3	0.783		

	EOU4	0.850		
	EOU5	0.675		
	EOU6	0.818		
	ISE6	0.674		
Internet self-efficacy (ISE)	ISE1	0.833	0.857	0.548
	ISE2	0.769		
	ISE3	0.685		
	ISE4	0.658		
	ISE5	0.744		
Need for cognition (NFC)	NFC2	0.767	0.703	0.450
	NFC3	0.596		
	NFC4	0.638		
Perceived enjoyment (PE)	CSES3	0.752	0.936	0.652
	PE1	0.762		
	PE2	0.830		
	PE3	0.864		
	PE4	0.884		
	PE5	0.820		
	PE6	0.850		
	PU4	0.675		
Privacy risk (PRIV)	PRIV2	0.537	0.724	0.401
	PRIV3	0.600		
	PSYC2	0.643		
	PSYC3	0.735		
Psychological risk (PSYC)	PRIV6	0.698	0.805	0.458
	PSYC5	0.613		
	PSYC6	0.644		
	PSYC7	0.691		
	SOC5	0.730		
Perceived usefulness (PU)	PU1	0.668	0.800	0.522
	PU2	0.589		
	PU5	0.818		
	PU6	0.791		
Susceptibility to norm influence (SNI)	NTB5	0.588	0.822	0.487
	SNI3	0.708		
	SNI4	0.712		
	SNI5	0.737		
	SNI6	0.734		
Intention to use (ITO)	ITO1	0.786	0.930	0.575
	ITO2	0.556		
	ITO3	0.721		
	ITO4	0.802		
	ITO5	0.829		
	ITO6	0.842		
	ITO7	0.846		
	ITO8	0.762		
	ITO9	0.725		
	ITO10	0.667		

7.8.4.4.a Inspection of modification indices of the test for reliability and validity of the non-users of Facebook model

The modification indices were again analysed for the non-users of Facebook model, in order to remove the items of the same factor with large modification index values, thus improving the model fit. Only two items, PRIV2, NTB5, did not load significantly and were removed from the final empirical model. The remaining items that formed part of the final model for the non-users of Facebook are presented in Table 7.50. Eight factors, namely *Dispositional trust*, *Ease of use*, *Internet self-efficacy*, *Perceived enjoyment*, *Perceived usefulness*, *Psychological risk*, *Susceptibility to norm influence* and *Intention to use* explained variance of more than 50%, while *Need for cognition* and *Privacy risk* had less than 50% explained variance.

TABLE 7.50

RESULTS OF THE TEST FOR RELIABILITY AND VALIDITY OF THE FINAL MODEL FOR NON-USERS OF FACEBOOK

Factors (latent variables)	Code	Measurement items	Cronbach's alpha	Average variance extracted
Dispositional trust (DT)	DT1	0.832	0.873	0.639
	DT2	0.830		
	DT3	0.737		
	DT4	0.794		
Ease of use (EOU)	EOU1	0.561	0.878	0.524
	EOU2	0.661		
	EOU3	0.783		
	EOU4	0.850		
	EOU5	0.675		
	EOU6	0.818		
	ISE6	0.674		
Internet self-efficacy (ISE)	ISE1	0.833	0.857	0.548
	ISE2	0.769		
	ISE3	0.685		
	ISE4	0.658		
	ISE5	0.744		
Need for cognition (NFC)	NFC2	0.767	0.703	0.450
	NFC3	0.596		
	NFC4	0.638		
Perceived enjoyment (PE)	CSES3	0.752	0.936	0.681
	PE1	0.762		
	PE2	0.830		
	PE3	0.864		
	PE4	0.884		
	PE5	0.820		
	PE6	0.850		

	PU4	0.675		
Privacy risk (PRIV)	PRIV3	0.537	0.724	0.438
	PSYC2	0.600		
	PSYC3	0.643		
Psychological risk (PSYC)	PRIV6	0.698	0.805	0.502
	PSYC7	0.697		
	SOC5	0.730		
Perceived usefulness (PU)	PU1	0.668	0.800	0.522
	PU2	0.589		
	PU5	0.818		
	PU6	0.791		
Susceptibility to norm influence (SNI)	SNI3	0.708	0.817	0.523
	SNI4	0.712		
	SNI5	0.737		
	SNI6	0.734		
Intention to use (ITO)	ITO2	0.556	0.905	0.575
	ITO3	0.721		
	ITO4	0.802		
	ITO5	0.829		
	ITO6	0.842		

7.8.4.4.b Average variance extracted compared to squared correlations for the barriers of Facebook non-users model

The results for the non-users of Facebook, summarised in Table 7.51, indicated that the only squared correlation with a value higher than the average variance extracted, was between *Psychological risk* and *Privacy risk,* which could indicate a lack of sufficient discriminant validity and needed to be assessed further.

TABLE 7.51

AVERAGE VARIANCE EXTRACTED COMPARED WITH SQUARED CORRELATIONS FOR THE FACEBOOK NON-USERS BARRIERS MODEL

	Dispositional trust	Internet self-efficacy	Intention to use	Privacy risk	Psychological risk
Dispositional trust	**0.639**				
Internet self-efficacy	0.004	**0.548**			
Intention to use	0.043	0.129	**0.574**		
Privacy risk	0.063	0.034	0.002	**0.438**	
Psychological risk	0.044	0.056	0.027	0.607	**0.502**

Note: AVE in bold and squared correlations below the diagonal

7.8.4.4.c The Chi-square difference test for Psychological risk and Privacy risk factors for the barriers of non-users of Facebook model

As indicated above, the *Psychological risk* and *Privacy risk* pair had a higher value than the average variance extracted and, therefore, it was necessary to conduct a Chi-square difference test to further investigate discriminant validity. However, because of the non-normal data distribution the unscaled Chi-square difference test cannot be used to test for discriminant validity and the statistical program AMOS does not have the ability to calculate the Satorra-Bentler scaled Chi-square statistic. Therefore a Bollen-Stine bootstrap procedure was performed, which represents an adjusted Chi-square value to be used to assess the discriminant validity of the paired constructs. The results of comparing the constrained with the unconstrained model is displayed in Table 7.52. The results showed that the Bollen-Stine p-value was significant at the 95% confidence interval, indicating sufficient discriminant validity between *Psychological risk* and *Privacy risk*. This result suggests that both variables could be retained in the barriers model for non-users.

TABLE 7.52

RESULTS OF THE CHI-SQUARE DIFFERENCE TEST FOR PSYCHOLOGICAL RISK AND PRIVACY RISK FACTORS FOR THE FACEBOOK NON-USERS BARRIERS MODEL

Paired constructs	χ^2 Unconstrained model (*df*)	χ^2 Constrained model (*df*)	χ^2 difference test		
			$\Delta\chi^2$	Δdf	Bollen-Stine p-value
Psychological risk and Privacy risk	48.733 (10)	27.421 (11)	21.313	1	0.038

7.8.4.4.d Average variance extracted compared to squared correlations for the motivators of Facebook non-users model

The motivators of Facebook non-users all demonstrated sufficient evidence of discriminant validity, with all average variance extracted having higher values than the squared correlations. The results are summarised in Table 7.53 as recommended by Fornell and Larcker (1981: 123).

TABLE 7.53

AVERAGE VARIANCE EXTRACTED COMPARED WITH SQUARED CORRELATIONS FOR THE FACEBOOK NON-USERS MOTIVATORS MODEL

	Ease of use	Need for cognition	Perceived enjoyment	Perceived usefulness	Susceptibility to norm influence
Ease of use	**0.524**				
Need for cognition	0.386	**0.450**			
Perceived enjoyment	0.211	0.017	**0.681**		
Perceived usefulness	0.126	0.024	0.475	**0.522**	
Susceptibility to norm influence	0.087	0.047	0.245	0.283	**0.523**

Note: AVE in bold and squared correlations below the diagonal

7.8.5 Stage V: Specifying the structural model

As discussed in Stage ll, the antecedents of the expanded Theory of Planned Behaviour were divided into two categories namely barriers and motivators to social network use (see Fig 7.1, 7.2, 7.3, and 7.4). The barriers and motivators (operationalised in Chapter 5) represent the latent constructs used in the structural equation modelling. Table 7.54 provides a summary of the manifest variables used in the questionnaire and finally included in the structural equation modelling.

TABLE 7.54

MANIFEST VARIABLES FOR THE FOUR MEASUREMENT MODELS

Factors (latent variables)	Code	Measurement items (manifest variables)
Dispositional trust (DT)	DT1	Most people can be trusted
	DT2	Most people try to be fair
	DT3	Most of the time people try to be helpful
	DT4	People mostly tell the truth
	DT5	People usually try to cooperate with others
Ease of use (EOU)	EOU1	Interaction with Facebook is simple
	EOU2	It took little effort for me to become skilful at using Facebook
	EOU3	I find Facebook easy to use
	EOU4	Learning to navigate Facebook was easy for me
	EOU5	Learning to navigate Facebook was easy for me

	EOU6	It is easy to understand how to use Facebook
	ISE6	I am comfortable using the Internet and feel no anxiety while using it
Internet self-efficacy (ISE)	ISE1	I feel confident understanding terms/words relating to Internet hardware
	ISE2	I feel confident understanding terms/words relating to Internet software
	ISE3	I feel confident troubleshooting Internet problems
	ISE4	I feel confident explaining why a programme will not run on the Internet
	ISE5	I feel confident learning advanced skills within a specific Internet programme
Need for cognition (NFC)	NFC2	I like to have the responsibility of handling a situation that requires a lot of thinking
	NFC3	I enjoy thinking hard and for long hours
	NFC4	The idea of relying on thought to progress in life appeals to me
	NFC5	I really enjoy a task that involves finding new solutions to problems
Perceived enjoyment (PE)	CSES3	Overall, I feel that belonging to Facebook is worth my while
	PE1	Using Facebook is entertaining
	PE2	I find Facebook pleasant to use
	PE3	Participating in Facebook is exiting
	PE4	Facebook is fun to use
	PE5	Participating in Facebook is enjoyable
	PE6	I believe that participating in Facebook would be pleasurable
	PU4	Using Facebook has a significant effect on the speed with which I am able to accomplish job/academic tasks online
Privacy risk (PRIV)	PRIV1	I am concerned that people could access my personal information on Facebook
	PRIV2	Facebook does not respect its users' personal information
	PRIV3	I am concerned with some of the aspects I read in the privacy statement of Facebook
	PRIV4	I am concerned that Facebook could share my information with others outside of Facebook
	PRIV5	I am concerned that hackers might get to my personal information on Facebook
	PRIV6	I am concerned with the fact that my Facebook activity will be monitored by others
	PSYC2	I am concerned that Facebook could cause cliques within my circle of friends, which may harm my friendships
	PSYC3	I am concerned with obscene pictures on Facebook.

Psychological risk (PSYC)	PSYC5	I believe that using Facebook may leave little time for real-world interaction, which could make me feel lonely
	PSYC6	I am concerned that I could be discriminated against, based on ethnic origin on Facebook
	PSYC7	I am concerned that I will be exposed to one or more of the following on Facebook: cursing, swearing, expletives, bad words, dirty words, nasty words, cussing, blasphemy, obscene material or indecent material
	SOC2	I am concerned with what others might think of me because of obscene photos that other people could send to me on Facebook
	SOC3	I am concerned that other people's discussion of illegal drug usage on Facebook could reflect poorly on me
	SOC5	I am concerned I could be humiliated by someone on Facebook as part of an initiation
Perceived usefulness (PU)	PU1	I believe Facebook is useful to me in my job/academic work
	PU2	Using Facebook has a significant effect on the speed with which I am able to accomplish job/academic tasks online
	PU5	Using Facebook gives me greater control over my job/academic work
	PU6	Using Facebook makes it easier to accomplish certain jobs or academic-related tasks
Susceptibility to norm influence (SNI)	CSES6	In general, belonging to Facebook is important to my self-image
	NTB5	It bothers me a great deal when I am not included in other people's plans
	SNI3	If other people can see me using a product, I often purchase the brand they expect me to buy
	SNI4	It is important that others like the products and brands I buy
	SNI5	I often identify with other people by purchasing the same products and brands they purchase
	SNI6	I like to know what brands and products make good impressions on others
Continued intention to use or Intention to use (ITO)	ITO2	I use Facebook to find information
	ITO3	I use Facebook to post photos or other media
	ITO4	I use Facebook for entertainment
	ITO5	I use Facebook in order to share my expertise with the members of Facebook
	ITO6	I use Facebook to share my interests with more people

7.8.6 Assessment of the structural model for users of Facebook

As discussed above, the hypothesised relations between the dependent or endogenous variables and the independent variables (or exogenous variables) were assessed using a structural equation. These hypotheses, which form the basis of the structural models, are presented next. The structural equation modelling for the four groups under investigation was conducted using Lisrel 8.80 (Jöreskog & Sörbom 2006).

7.8.6.1 Hypotheses for the barriers to social network use for users of social media

H1: *Dispositional trust* positively influences the *Continued intention to use* social media by users of social media

H2: *Internet self-efficacy* positively influences the *Continued intention to use* social media by users of social media

H3: *Privacy risk* negatively influences the *Continued intention to use* social media by users of social media

H4: *Psychological risk* negatively influences the *Continued intention to use* social media by users of social media

7.8.6.2 Hypotheses for the motivators of social network use by users of social media

H5: *Perceived enjoyment* positively influences the *Continued intention to use* social media by users of social media

H6: *Perceived ease of use* positively influences the *Continued intention to use* social media by users of social media

H7: *Need for cognition* positively influences the *Continued intention to use* social media by users of social media.

H8: *Susceptibility to norm influence* positively influences the *Continued intention to use* social media by users of social media.

H9: *Perceived usefulness* positively influences the *Continued intention to use* social media by users of social media.

7.8.6.3 Structural model for the barriers to social media users model

The model fit indices scores for the barriers of Facebook users were: RMSEA=0.0220, CFI=0.994 and Satorra-Bentler/df (183.591/160)=1.147. Based on the decision rules discussed above (recommended RMSEA values < 0.05 with CFI > 0.95 and the Satorra-Bentler scaled Chi-square/df < 2) as suggested by Hair *et al.* (2010: 480), all the indices indicated a close fit. The results of the structural model for the barriers of Facebook users are illustrated in Figure 7.5, indicating a statistically significant relationship between *Dispositional trust* and *Continued intention to use Facebook, between Internet Self-efficacy* and *Continued intention to use Facebook,* and between *Psychological trust* and *Continued intention to use* Facebook. The relationship between *Privacy risk* and *Continued intention to use Facebook* was found to be statistically insignificant.

The path coefficient for the relationship between the *Dispositional trust* of users of Facebook and their *Continued intention to use Facebook*, with a t-value of 2.33, was positively related ($p < 0.05$, with the t-value for the relationship between 1.96 and 2.58). **Hypothesis H_1 was, therefore, accepted.**

Internet self-efficacy of Facebook users was found to be positively related with their *Continued intention to use Facebook* with a t-value of 3.20 ($p < 0.01$, with a t-value for the relation larger than 2.58), therefore, **Hypothesis H_2 was accepted.**

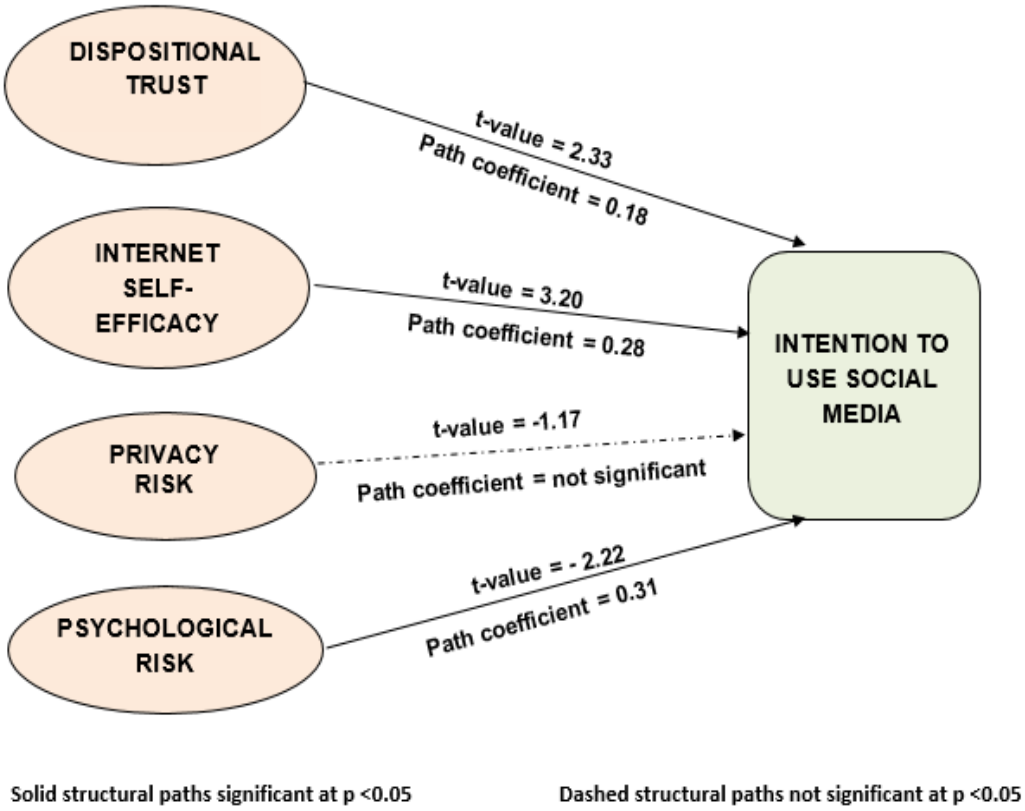
The *privacy concerns* for Facebook users were found not to be statistically significant with a t-value of -1.17 (which falls below the critical value of 1.96). **Hypothesis H_3 was, therefore, rejected.**

The *Psychological risk* of Facebook users was negatively related with their *Continued intention to use* Facebook, with a t-value of -2.22 ($p < 0.05$) and thus **Hypothesis H_4 was accepted.**

The structural model for the Facebook users barriers model is presented in Fig 7.5.

FIGURE 7.5

STRUCTURAL MODEL FOR THE FACEBOOK USERS BARRIERS MODEL



7.8.6.4 Structural model for the motivators of Facebook users

The goodness-of-fit indices for the motivators of Facebook users, with values of RMSEA=0.0481, CFI= 0.979, Satorra-Bentler/df (527.355/309) = 1.707, all indicated a close fit (recommended RMSEA values < 0.05 with CFI > 0.95 and the Satorra-Bentler scaled Chi-square/df < 2) as suggested by Hair *et al.* (2010: 480).

Figure 7.6 illustrates the structural model for the motivators of Facebook users and shows a significant relationship between *Perceived enjoyment* and the *Continued intention to use Facebook*, and also a significant relationship between *Perceived usefulness* and the *Continued intention to use Facebook*. *Perceived ease of use* and, the *Need for cognition* and *Susceptibility to norm influence* did not significantly influence the dependent variable *Continued intention to use* Facebook.

The results indicated a significant positive relationship between the motivator constructs *Perceived enjoyment* and the *Continued intention to use Facebook* for Facebook users, with a t-value of 3.49 ($p < 0.001$, with the t-value greater than 3.30),

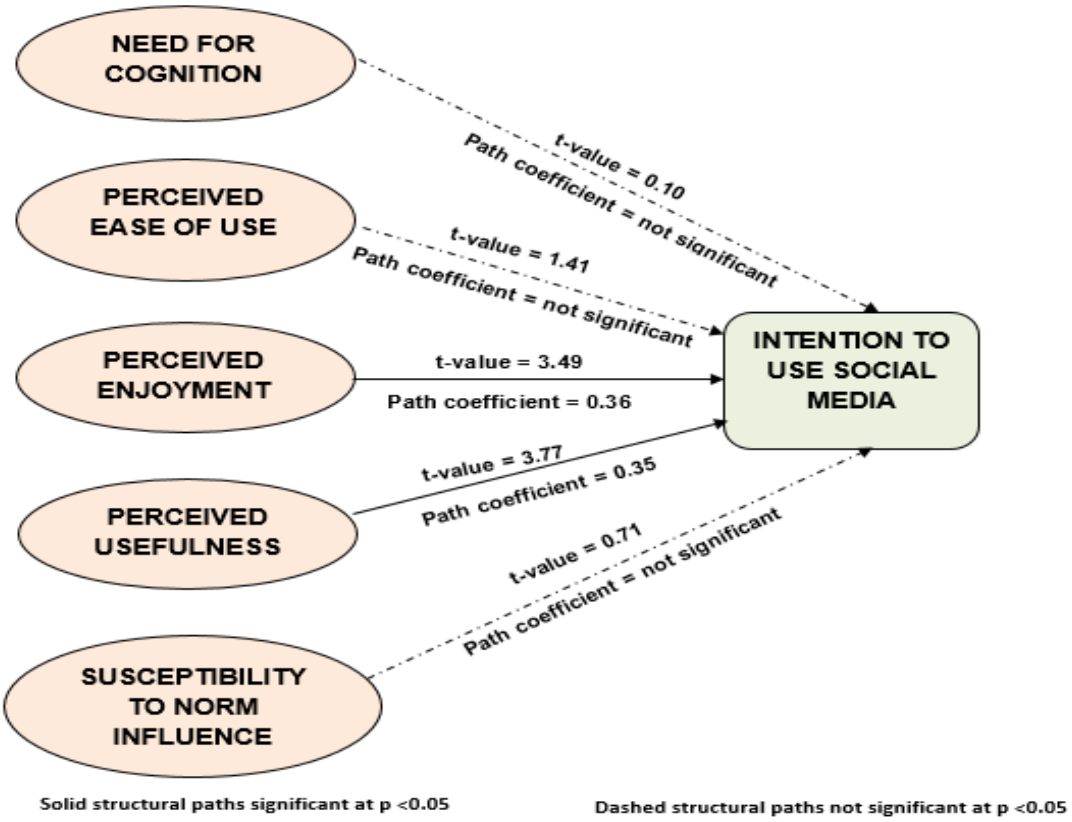
which lead to the conclusion that **Hypothesis H5, should be accepted.**

The other significant relationship for users of Facebook existed between *Perceived usefulness* and *Facebook users' Continued intention to use Facebook*, with a t-value of 3.77 ($p < 0.001$) leading to the **acceptance of Hypothesis H9.**

The relationship between *Perceived ease of use, Need for cognition, Susceptibility to norm influence* and the *Continued intention to use Facebook* was statistically insignificant with t-values of 1.41, 0.10 and 0.71 respectively, resulting to the **rejection of Hypotheses H6, H7 and H8.** The structural model for the Facebook users motivators model is presented in Fig 7.6.

FIGURE 7.6

STRUCTURAL MODEL FOR THE FACEBOOK USERS MOTIVATORS MODEL



A summary of the results of the hypothesis testing, following the inspection of the p-values and path coefficients for both the Facebook users barriers model and the Facebook users motivators model are presented in and Table 7.55..

TABLE 7.55

SUMMARY OF THE RESULTS OF THE HYPOTHESIS TESTING FOR FACEBOOK USERS

Hypothesis	Independent variable	Dependent variable	Direction of relation	Hypothesis Accepted/rejected
H1	Dispositional trust of Facebook users	Continued intention to use Facebook	+	Accepted*
H2	Internet self-efficacy of Facebook users	Continued intention to use Facebook	+	Accepted**
H3	Privacy risk of Facebook users	Continued intention to use Facebook	-	Rejected
H4	Psychological risk of Facebook users	Continued intention to use Facebook	-	Accepted*
H5	Perceived enjoyment of Facebook users	Continued intention to use Facebook	+	Accepted**
H6	Ease of use of Facebook users	Continued intention to use Facebook	-	Rejected
H7	Need for cognition of Facebook users	Continued intention to use Facebook	-	Rejected
H8	Norm influence of Facebook users	Continued intention to use Facebook	-	Rejected
H9	Perceived usefulness of Facebook users	Continued intention to use Facebook	+	Accepted**

* Significant at the 95% confidence level

**Significant at the 99% confidence level

7.8.7 Assessment of the structural model for non-users of Facebook

7.8.7.1 Barriers to social network use for non-users of social media

The hypotheses that form the basis for the structural model for the non-users of Facebook are as follows:

H10: *Dispositional trust* positively influences the *Intention to use* social media by non-users of social media

H11: *Internet self-efficacy* positively influences the *Intention to use* social media by non-users of social media

H12: *Privacy risk* negatively influences the *Intention to use* social media by non-users of social media

H13: *Psychological risk* negatively influences the *Intention to use* social media by non-users of social media

H14: *Perceived enjoyment* positively influences the *Intention to use* social media by non-users of social media

7.8.7.2 *Motivators of social network use for non-users of social media*

H15: *Perceived ease of use* positively influences the *Intention to use* social media by non-users of social media

H16: *Need for cognition* positively influences the *Intention to use* social media by non-users of social media

H17: *Susceptibility to norm influence* positively influences the *Intention to use* social media by non-users of social media

H18: *Perceived usefulness* positively influences the *Intention to use* social media by non-users of social media

7.8.7.3 Structural model for barriers of Facebook non-users

The goodness of fit indices with scores of RMSEA=0.0512, CFI=0.971 and Satorra-bentler/df (335.083/179)=1.872 indicated a close model fit for the Facebook non-

users barriers model (all scores were better than the recommended RMSEA values < 0.05, CFI > 0.95 and Satorra-Bentler scaled chi-square/df ratio of < 2).

The structural model for the barrier constructs of Facebook non-users is represented in Figure 7.7 and indicates a statistically significant relationship between *Dispositional trust* and *Intention to use Facebook, Internet Self-efficacy* and *Intention to use Facebook,* and *psychological trust* and *Intention to use Facebook*. The relation between *Privacy risk* and *Intention to use* was found not to be statistically significant.

The path coefficient for the relationship between *Dispositional trust* and the *Intention to use Facebook* for non-users of Facebook, with a t-value of 2.08, was positively related ($p < 0.05$, with a t-value larger than 1.96) and, therefore, **Hypothesis H_{10} was accepted.**

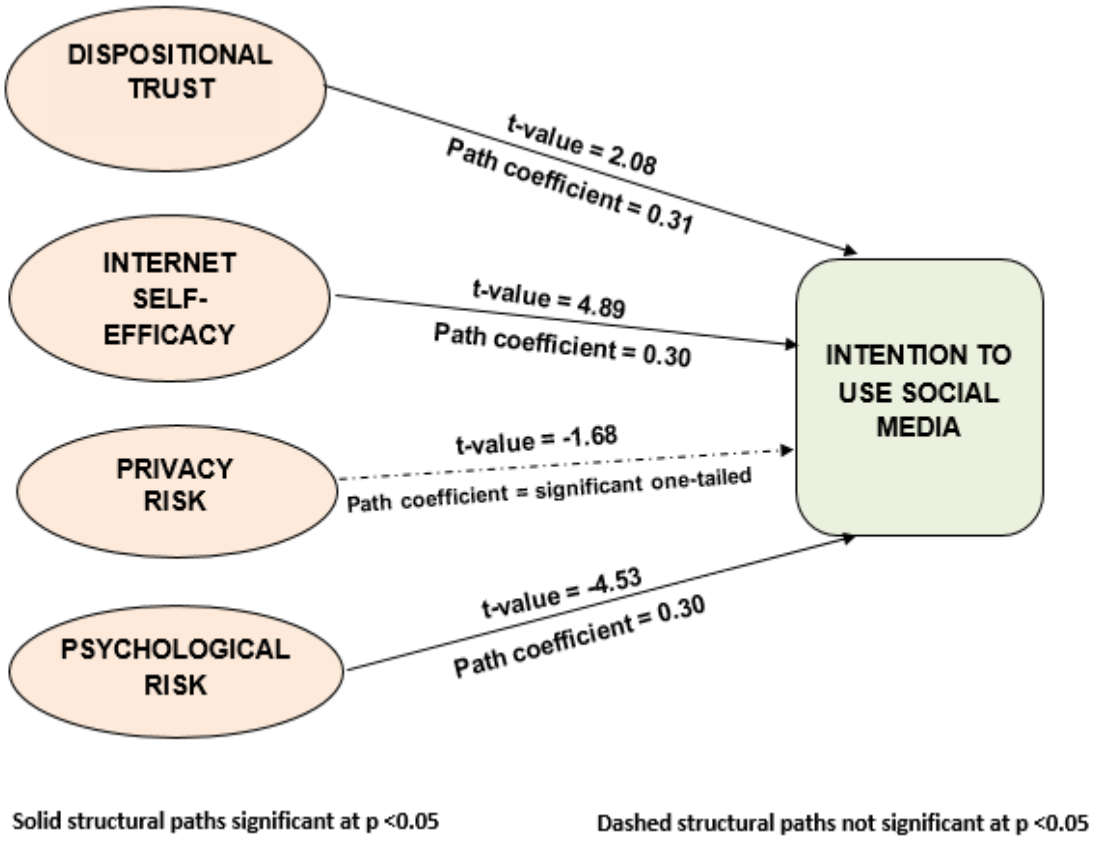
The relationship between *Internet Self-efficacy* and the *Intention to use Facebook* was found to be strong and positive, with a t-value of 4.89 ($p < 0.001$ with a t-value greater larger than 3.30) and lead to the **acceptance of Hypothesis H_{11}.**

Hypothesis H_{12} was accepted, as a significant relationship was found between *Privacy risk* and the *Intention to use Facebook* for non-users of Facebook, with a t-value of -1.68 (statistically significant at the 95% confidence level), seeing that the t-value was higher than 1.64 (the critical value for a one-tailed test).

Hypothesis H_{13} was accepted, as a strong negative relationship was found to exist between *Psychological risk* and the *Intention to use Facebook*, with a t-score of -4.53 ($p < 0.001$).

FIGURE 7.7

STRUCTURAL MODEL FOR THE FACEBOOK NON-USERS BARRIERS MODEL



7.8.7.4 Structural model for motivators of Facebook non-users

All the goodness-of-fit results, with values of RMSEA=0.0547, CFI=0.980 and Satorra-Bentler/df (1155.952/579) =1.966, indicated a close fit above the recommended CFI > 0.95 and Satorra-Bentler scaled Chi-square score/df of < 2). The RMSEA values of < 0.08 indicated a reasonable fit.

The structural model for the motivator constructs of Facebook non-users is summarised in Figure 7.8 and shows significant relations between *Perceived enjoyment* and the *Intention to use Facebook* and also a significant relation between *Perceived usefulness* and the *Intention to use Facebook*. *Perceived ease of use* and, *Need for cognition* and *Susceptibility to norm influence* did not significantly influence the dependent variable *Intention to use* Facebook.

Hypothesis H14 was accepted, as the relationship between *Perceived enjoyment* and the *Intention to use Facebook* for non-users of Facebook was found to be

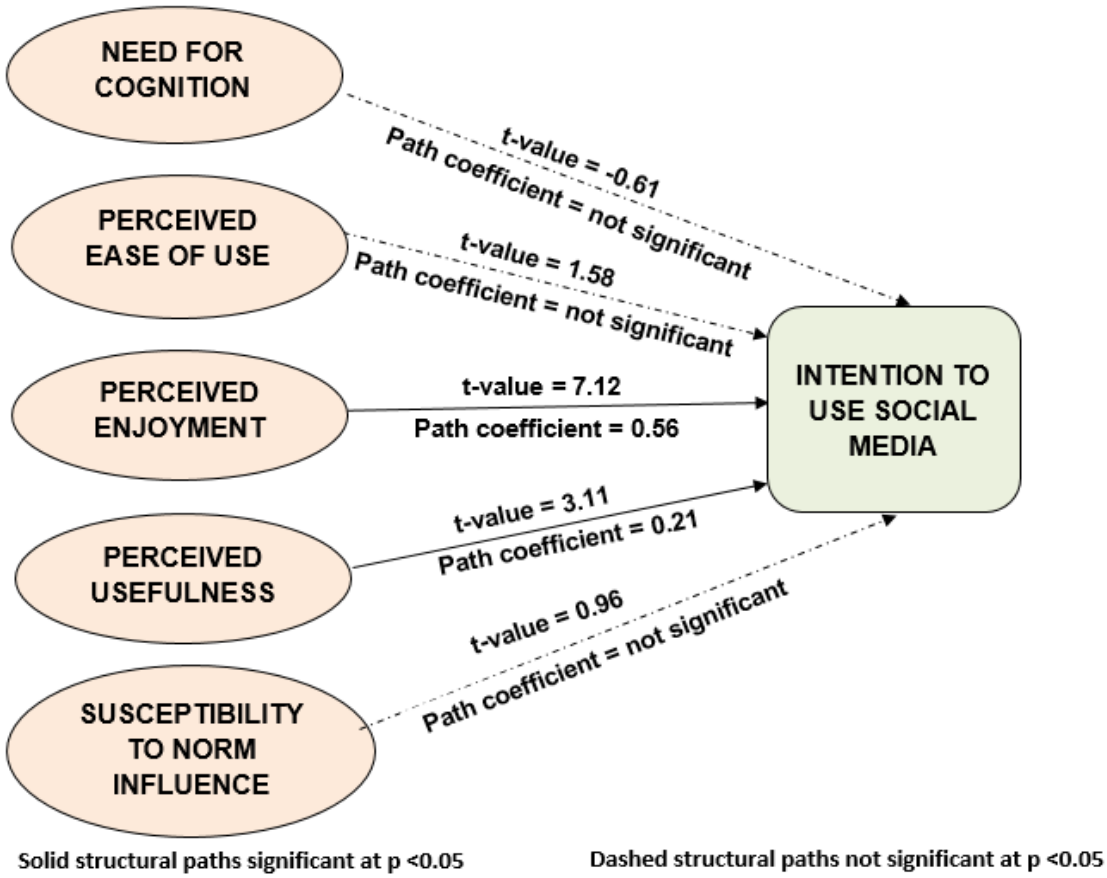
positive and very strong and statistically significant with a score of 7.12 ($p < 0.001$).

The other significant relationship found was between *Perceived usefulness* and the *Intention to use Facebook*, with a positive relation score of 3.11 ($p < 0.05$) and, therefore, **Hypothesis H18 was accepted.**

The relationships between *Perceived ease of use, Need for cognition* and *Susceptibility to norm influence* and the *Intention to use Facebook* for Facebook non-users were found to be statistically non-significant, with t-values of 1.58, -0.61 and 0.96 respectively. This resulted in the **rejection of Hypotheses H15, H16 and H17 respectively.**

FIGURE 7.8

STRUCTURAL MODEL FOR THE FACEBOOK NON-USERS MOTIVATORS MODEL



A summary of the hypothesis testing of the combined barriers and motivators models for the non-users of Facebook is presented in Table 7.56.

TABLE 7.56

SUMMARY OF HYPOTHESIS TESTING FOR NON-USERS OF FACEBOOK

Hypothesis	Independent variable	Dependent variable	Direction of relation	Hypothesis Accepted/rejected
H10	Dispositional trust of non-users of Facebook	Intention to use Facebook	+	Accepted*
H11	Internet self-efficacy of non-users of Facebook	Intention to use Facebook	+	Accepted**
H12	Privacy risk of non-users of Facebook	Intention to use Facebook	-	Accepted*
H13	Psychological risk of non-users of Facebook	Intention to use Facebook	-	Accepted**
H14	Perceived enjoyment of non-users of Facebook	Intention to use Facebook	+	Accepted**
H15	Ease of use of non-users of Facebook	Intention to use Facebook	+	Rejected
H16	Need for cognition of non-users of Facebook	Intention to use Facebook	-	Rejected
H17	Norm influence of non-users of Facebook	Intention to use Facebook	-	Rejected
H18	Perceived usefulness of non-users of Facebook	Intention to use Facebook	+	Accepted**

* Significant at the 95% confidence level
** Significant at the 99% confidence level

The implications of the combined relationships between the barriers and the motivators of Facebook users and non-users, which are summarised in Tables 7.56 and 7.57, will be discussed in Chapter 8.

7.9 LOGISTIC REGRESSION

An important objective of this study was to investigate the motivators and barriers, as antecedents to social network usage, which distinguish users of Facebook from non-users of Facebook. Simple regression was not suitable to analyse the association between the independent and dependent variable, because the user and non-user data were categorical in nature. Users and non-users were represented as binary variables, with a 0, if a non-user of Facebook, and 1, if a user of Facebook.

Logistic regression exponentiates the regression formula in order to arrive at a binomial probability that multiple independent variables will affect membership of two mutually exclusive dependent variable categories. The logistic regression also calculate the strength of the relationship among the variables by predicting the probability of group membership for a one unit increase in the independent variable (Aubrey et al., 2008: 569).

A logistic regression analysis was conducted in order to assess the effects of *gender, age, ethnic classification, Dispositional trust, Perceived ease of use, Internet self-efficacy, Need for cognition, Perceived enjoyment, Privacy risk, Psychological risk, Perceived usefulness and Susceptibility to norm influence* had on the likelihood of Internet users being Facebook users. Non-users of Facebook were used as the reference category (non-users = 0) and compared to the users of Facebook (users = 1).

7.9.1 Model fit

According to Burns and Burns (2008: 577), a number of diagnostics can be used to analyse the model fit of a logistic regression model. One such diagnostic is to compare the prediction power of Step 0 with Step 1, model Chi-square, Hosmer-Lemeshow goodness-of-fit test and the area under the ROC curve.

7.9.1.1 *Comparison of the predicting percentage of Step 0 with Step1*

The logistic regression was used to determine the probability that Internet users would be either a Facebook user on non-user, based on the independent variables,

namely the barriers and motivators of social network usage. The first step in determining the probability of being a Facebook user or a non-user was to compare the result of a regression analysis containing only the dependent variables and a regression analysis containing both the dependent and independent variables. The results of the regression analysis of Step 0 containing the regression results, if only the constant or dependent variables were included in the model were compared to the regression analysis results of Step 1 containing the regression results, with all the independent variables included in the model (Burns & Burns, 2008). The percentage of correct predictions in Step 0 (without independent variables) was 52.5% (see Table 7.57), compared to the correct predictions of 76.2% for Step 1 (with independent variables included), as represented in Table 7.58. These results indicated that the prediction power of the model to predict whether or not users were likely to belong to Facebook, increased by 23.7% due to the inclusion of the independent variables in the model.

TABLE 7.57

CLASSIFICATION TABLE FOR BLOCK 0 - BEGINNING BLOCK

Observed			Predicted		
			User=1/non-user=0		Percentage Correct
			Non-user	User	
Step 0	User=1/non-user=0	Non-user	339	0	100.0
		User	307	0	.0
	Overall percentage				52.5

TABLE 7.58

CLASSIFICATION TABLE FOR BLOCK 1 – INDEPENDENT VARIABLES INCLUDED

Observed			Predicted		
			User=1/non-user=0		Percentage Correct
			Non-user	User	
Step 1	User=1/non-user=0	Non-user	264	75	77.9
		User	79	228	74.3
	Overall percentage				76.2

This improvement in predicting power, when the independent variables were included, compared to when they were not included, was an indication of close model fit. To assess whether this increase in predicting power was significant, and thus indicating a close fit, a Chi-square test was conducted.

7.9.1.2 Model Chi-square

The null hypothesis for the logistic regression analysis states that:

H_{01}: The coefficients of the independent variables in the logistic regression equation take the value of zero

H_{a1}: The coefficients of the independent variables differ significantly from zero. If Ha1 is acceptable it will indicate that the model containing the independent variables is to be preferred.

If the Chi-square test for the logistic regression model is significant ($p < 0.05$), the null hypothesis is rejected and the alternate hypothesis accepted, which means that the model containing the independent variables is accurate (Burns & Burns, 2008: 574).

The model Chi-square revealed a significance level of .000. This result indicates that the model had a poor fit for the model containing only the constant and, therefore, the model containing the independent variables created a unique, statistically significant model, as can be seen in see Table 7.59.

TABLE 7.59

CHI-SQUARE TEST FOR THE LOGISTIC REGRESSION MODEL

		Chi-square	df	Sig.
Step 1	Step	236.792	16	.000
	Block	236.792	16	.000
	Model	236.792	16	.000

7.9.1.3 Hosmer-Lemeshow test

An alternative metric to model Chi-square is the Hosmer and Lemeshow test and, in contrast to the model Chi-square test, a non-significant p-score of > 0.05 indicates a well-fitting model (Burns & Burns, 2008: 580). The p-value of 0.174 for the Hosmer-Lemeshow goodness-of-fit test, indicated the desirable outcome of non-significance, thus indicating a close model fit (see Table 7.60).

TABLE 7.60

HOSMER-LEMESHOW TEST

Step	Chi-square	df	Sig.
1	11.523	8	.174

7.9.1.4 Area under the ROC curve

The final analysis conducted was a Receiver Operating Characteristics curve (ROC curve) analysis, which indicated the accuracy of the model's predicted values to discriminate between positive and negative cases and quantified by the Area under the ROC curve (AUC). This analysis of accuracy was achieved by taking into account the specificity and sensitivity of the model. The AUC, sometimes referred to as the c-statistic (or concordance index), has a transformed index that varies from 0.5 (discriminating power not better than chance) to 1.0 (perfect discriminating power). The AUC was 0.830 and significant (ρ=.000) indicating that the model had ‘good’ accuracy when distinguishing between users and non-users of Facebook (Krzanowski & Hand, 2009: 80).

Considering the discussion on the model fit observed, it can be concluded that the model demonstrates acceptable fit with the data.

7.9.2 Interpretation of the logistic regression analysis

The logistic regression results were analysed by considering the following statistics recommended by (Burns & Burns, 2008): Nagelkerke’s R-square, the Wald statistic and the expected Beta [Exp(B)] values.

7.9.2.1 Nagelkerke R-square

The Nagelkerke R-square indicates the percentage of variance explained by the independent variables and is an adjusted Cox and Snell measure in order for the range of results to range from 0 to 1 (Burns & Burns, 2008: 580). The model score of 0.410 indicated a moderately strong relationship between the independent variables and group membership.

7.9.2.2 Wald statistic

The Wald statistic and associated probabilities is an indicator of whether the independent variables are making a statistically significant contribution to the predictor of the dependent variable. If the z-values for the Wald statistic are less than 0.05, the null hypothesis is rejected, as the variable does make a significant contribution (Burns & Burns, 2008: 581). The significance values for the Wald statistic showed that the main variables of *gender, age, race*, *Perceived ease of use, Perceived usefulness, Psychological risk, Perceived usefulness and Susceptibility to norm influence* were all statistically significant predictors of continued Facebook usage by general Internet users. In contrast, the significance values indicated that for Internet users between the ages of 26-35 and 36-45, *Dispositional trust, Internet Self-efficacy, Need for cognition* and *Privacy risk* were not significant predictors of Facebook use.

7.9.2.3 Expected Beta coefficients or Exp (B)

The expected Beta coefficients or Exp (B) shown in Table 7.61 are a measure of effect size and indicate the extent to which increasing the independent variable with one unit will influence the odds ratio. If the Exp (B) is greater than one, then the odds of an event will increase and if the Exp (B) is less than one, then an increase in the independent variable will lead to a decrease in the odds of the dependent variable increasing (Burns & Burns, 2008: 582). The results of the logistic regression analysis are presented in Table 7.61 and interpreted in Chapter 8.

Table 7.61

LOGISTIC REGRESSION RESULTS

Covariates	Categorical covariates	B	S.E.	Wald	df	Sig.	Exp(B)
Gender	Gender (1)	.107	.197	.296	1	.587	1.113
Age	Age 15-25			15.150	3	.002	
	Age 26-35	-.521	.276	3.558	1	0.59	.594
	Age 36-45	-1.069	.301	12.661	1	.000	.343
	Age 46+	-.912	.326	7.829	1	.005	.402
Ethnic classification	Black			30.007	2	.000	
	Asian, coloured, Indian	-.032	.358	.008	1	.929	.968
	White	1.276	.288	19.648	1	.000	3.583
Mean *Dispositional trust*		.023	.080	.081	1	.776	1.023
Mean *Ease of use*		.678	.115	34.466	1	.000	1.970
Mean *Internet self-efficacy*		.034	.091	.136	1	.713	1.034
Mean *Need for cognition*		.039	.097	.163	1	.686	1.040
Mean *Perceived enjoyment*		.533	.109	24.085	1	.000	1.705
Mean *Privacy risk*		-.163	.102	2.529	1	.112	.850
Mean *Psychological risk*		-.230	.098	5.485	1	.019	.794
Mean *Perceived usefulness*		-.216	.096	5.051	1	.025	.806
Mean *Susceptibility to norm influence*		-.335	.096	12.177	1	.000	.715

7.10 RESULTS FOR GRATIFICATIONS SOUGHT

As mentioned earlier, in order to gain a more complete understanding of the factors influencing social media usage, both the antecedents to using social media, and gratifications sought from using social media, were examined. The gratifications sought were assessed to determine whether specific behavioural expectations from social network existed that could indicate reasons for using social network sites or not. The results are again presented separately for both users and non-users of Facebook.

The mean scores and independent samples t-test for the gratifications sought are displayed in Table 7.62.

TABLE 7.62

A COMPARISON OF USERS AND NON-USERS IN TERMS OF GRATIFICATIONS SOUGHT

						t-test for equality of means		
Gratifications sought	**Users/ non-users**	**n**	***Mean***	**Std. Deviation**	**Std. Error Mean**	**t**	**df**	**p**
Information-seeking	Facebook users	307	*4.329*	1.833	0.105	3.684	639	.000***
	Facebook Non-users	334	*3.790*	1.864	0.102			
Media drenching	Facebook users	307	*5.117*	1.737	0.099	9.097	639	.000***
	Facebook Non-users	334	*3.775*	1.976	0.108			
Diversion	Facebook users	307	*5.212*	1.563	0.089	9.138	639	.000***
	Facebook Non-users	334	*3.937*	1.931	0.106			
Performance	Facebook users	307	*4.189*	1.852	0.106	4.162	639	.000***
	Facebook Non-users	334	*3.581*	1.845	0.101			
Narcissism	Facebook users	307	*4.853*	1.738	0.099	6.615	639	.000***
	Facebook Non-users	334	*3.892*	1.925	0.105			
Relationship maintenance	Facebook users	307	*5.964*	1.292	0.074	9.438	639	.000***
	Facebook Non-users	334	*4.728*	1.933	0.106			
Aesthetic experience	Facebook users	307	*3.866*	1.931	0.110	2.109	639	.035**
	Facebook Non-users	334	*3.554*	1.821	0.100			
Virtual community	Facebook users	307	*3.248*	1.789	0.102	.161	639	.872

	Facebook Non-users	334	*3.225*	1.818	0.099			
Reference	Facebook users	307	*2.899*	1.842	0.105	-4.457	639	.000***
	Facebook Non-users	334	*3.563*	1.922	0.105			

(* p<0.05; ** p<0.01; ***p<0.001)

The mean scores of the gratifications sought between users and non-users of social media indicated that Facebook users had higher means for all items, except for Reference. In order to determine whether the differences in the mean scores of the gratifications sought between users and non-users of social media were statistically different, independent samples t-tests were conducted. The results of the t-tests are depicted in Table 7.62.

The results of the t-tests reported in Table 7.62 indicated that statistically significant differences existed between users and non-users of Facebook, with regard to *Information-seeking* behaviour*, Media drenching, Diversion, Performance, Narcissism, Relationship maintenance, Aesthetic experience* and *Reference* behaviour. The difference in the mean scores between users and non-users of social media, with regard to *Virtual community*, was found not to be statistically significant.

The implications of the results of the independent t-tests, along with the hypotheses testing are discussed in Chapter 8.

7.11 SUMMARY

The purpose of this chapter was to present the empirical findings of the study based on the research methodology set out in Chapter 6, and ultimately to examine the objectives of the study by means of hypothesis testing.

The first section consisted of descriptive statistics to analyse the demographic characteristics of the two groups under investigation, namely the users and non-users of Facebook. The analyses consisted of frequency tables, cross-tabulations, sample t-tests, and a one-way ANOVA. The data were further tested for normality and finally the structural equation modelling was conducted.

In the following and last chapter the main findings of the data analysis are summarised and interpreted, in order to draw the final conclusions from the study and to suggest ways how these conclusions can affect the use of Facebook for marketing purposes. Recommendations are also made for possible future research.

Chapter 8

FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

8.1 INTRODUCTION

Chapter 1 served as an introduction to the study and set out the research problem, the objectives of the study and the methodology that would be used to investigate the research problem. Chapter 2 provided the context of the study and illustrated the role that social networking plays as a component of an integrated market communication strategy. It showed how the strategic utilisation of computing power can maximise the effectiveness, efficiency and productivity of business enterprises. A detailed discussion of the different types of social networking was provided in Chapter 3 and Facebook, as the largest social network site, was introduced. The theoretical foundation for the current study was discussed in Chapter 4, namely to provide an expanded Theory of Planned Behaviour model, which was an important objective of this study. The development and operationalisation of the conceptual model and measurement scales used in the study were discussed in Chapter 5. In Chapter 6 the research methodology used in the current study were explained and justified, while the empirical findings of the research methodology were provided in Chapter 7.

The primary objective of this study was to investigate the intentions of users and non-users of social network sites to either continue using social network sites or to use social network sites in the future, by using a comprehensive, decomposed Theory of Planned Behaviour. Due to the size and complexity of the decomposed Theory of Planned Behaviour, the antecedents to the *Intention to use* social network sites were divided into two sub-models, namely motivators and barriers to social network sites usage. In addition to the antecedent motivators and barriers, the gratifications sought from social network usage were also explored, to identify the reasons for continued social network sites usage or non-usage. This choice of continued usage of or non-usage of social network sites by both user and non-user groups, was further investigated, using a logistical regression analysis, to quantify the probability of group membership and based on the motivators and barriers of the

decomposed Theory of Planned Behaviour. The demographical attributes of the users of social network sites with regard to certain specific social network site use, were also investigated.

Based on these objectives, Chapter 8 summarises and interprets the empirical findings of Chapter 7, in order to draw conclusions and offer recommendations for both managerial and academic purposes.

8.2 THE INFLUENCE OF DEMOGRAPHICS ON FACEBOOK USE

The demographical attributes of gender and age were found to influence both Internet and social network site users. Gülnar *et al.* (2010: 161) observed systematic differences between males and females with regard to self-expression, information-seeking and relationship maintenance on Facebook. Tufekci (2008: 544) concluded that gender is a strong predictor of the number of friends and also of the volume of social network site usage. Taraszow *et al.* (2010: 87) highlighted the importance of comparing the behaviour of males and females online, to allow customisation of potential market communication for those using Facebook as a marketing communication channel. Age appeared to have an inverse relationship with the use of technology. Madden and Savage (2000: 182) found an inverse relationship to be present between age and social network usage while Joinson (2008: 1035) found that both age and gender impact on the purpose of social network usage.

Cha (2010) point out that user acceptance of new media could be measured using the frequency of new media usage and the extent of new media usage and Kraut *et al.* (2002: 8) found that user acceptance could be measured in different ways, including hours of Internet use. Therefore, gender and age were compared in respect of the years of membership of Facebook; number of hours spent on Facebook per week; number of Facebook visits per week; and the number of Facebook friends. The objective was to assess whether statistically significant differences existed between males and females as well as among the four age categories. Cross-tabulations, t-tests, Levene's test and an ANOVA were used to analyse the stated demographical attributes and specific Facebook usage.

8.2.1 Gender differences in terms of years of membership, hours spent on Facebook, number of Facebook visits and number of Facebook friends dimensions

The results indicated that there was no statistically significant difference between the genders with regard to the reported number of years' membership of Facebook, number of hours spent on Facebook per week, the number of Facebook visits per week and the number of Facebook friends. A statistically significant difference did exist, however, between males and females with regard to the number of hours spent on Facebook per week. On average, women spend 5.3 hours on Facebook per week, compared to 3.9 hours per week for men, which means that women, on average, spent 36.2% more time on Facebook than men do. This finding concurs with those of Nadkarni and Hofmann (2012), who also assert that females use Facebook more than males do. These findings provided further evidence that gender differences do exist when using social network sites. This observation is consistent with other findings indicating different online behaviour between males and females. Garbarino and Strahilevitz (2004: 768) found that women perceived greater risk when using the Internet than males do, but experienced greater perceived risk reduction from word-of-mouth referrals than men do. According to Gauvin, Ribeiro, Towsley, Liu and Wang (2010: 40), female users of social media are more concerned with privacy than male users, but female users tend to publish more website links and images than males, notwithstanding their privacy concerns.

These findings highlight the necessity that social network site developers have to take into account the differences between men and women when designing the architecture and navigation of social network sites, in order to make provision for the needs of both genders. Considering the difference in social network usage between men and women and the findings of the present study that women spend more time on social network sites than their male counterparts, specific behavioural characteristics of female social network users should be taken into account, when developing a marketing mix for social network site engagement. The differences between male and female social network usage should be an important factor to marketers when profiling social network site users for segmentation and targeting markets.

8.2.2 Age differences in terms of years of membership, hours spent on Facebook, number of Facebook visits and number of Facebook friends dimensions

A one-way ANOVA was used to assess whether a statistical significant difference existed between the four age categories and number of years' membership of Facebook, the number of hours spent on Facebook per week, the number of Facebook visits per week and the number of Facebook friends. The differences among the age categories showed a statistically significant difference only in relation to the number of the Facebook friends' dimension. The results showed a significant difference in the age groups 15–25 years and 36 – 45 years, the age groups 15–25 years and 46–55 years, and the age groups 15–25 years and 56–65 years. The age group 15–25 years had an average of 373.0 friends, the age group 36–45 years had 153.1 friends on average, the age group 46–55 years had 165.4 friends, while the age group 56–65 had 68.0 friends on average. These findings are consistent with those reported by Madden and Savage (2000: 182) and Pfeil, Arjan and Zaphiris (2009: 648) who determined that the older the Internet users or social network users were, the fewer friends they generally had. In addition, Pfeil *et al.* (2009: 653) also found that younger social network users had friends who were mostly within 2 years of their own age, used different media compared to older users (i.e. more use of video and music) and commented ten times more on the profile pages of their friends compared to older social network users. Pfeil *et al.* (2009: 653) surmised that older social network users were more risk averse than younger users and, therefore, had fewer friends. They also valued the social capital (i.e. social currency of social networks) associated with a large group of friends lower than their younger counterparts did. Joinson (2008: 1035) concurs with this finding that different age groups use social networks for different purposes. The implication of this finding for social network site developers and marketers is that they should provide more information of profiles or products, in order to alleviate the risk perceived by older users to use social network sites.

8.3 THE DECOMPOSED THEORY OF PLANNED BEHAVIOUR MODEL

The decomposed Theory of Planned Behaviour model could be considered a complex model in terms of the number of parameters that had to be estimated statistically. Therefore, to make the analysis more manageable, the constructs influencing the intention to use social network sites were divided into separate models, namely a 'motivators model' and a 'barriers model'. Motivators are regarded as those constructs that positively influence the *Intention to use or the Continued intention to use* social network sites, whereas barriers are considered as those constructs that could hamper the *Intention to use or Continued intention to use* social network sites. This division effectively meant that four sub-models were investigated, namely, motivators for users; motivators for non-users; barriers for users and barriers for non-users.

8.3.1 Validity of the measuring instrument

An exploratory factor analysis was conducted for both the users and the non-users of Facebook, so that the discriminant validity of the variables could be assessed. This analysis redefined some of the latent variables, by only including the manifest variables (or items) that loaded to a significant extent in the final model to be used for the structural equation modelling. The factors affecting the *Intention to use or Continued intention to use* Facebook were regarded as correlated and, therefore, the Principal Axis Factoring with direct quartimin oblique rotation were specified as extraction and rotation methods.

8.3.1.1 Results of the exploratory factor analysis for users of Facebook

The exploratory factor analyses results revealed that the instrument used to measure the latent variables *Collective self-esteem* (i.e. the emotional significance, derived from the knowledge that the individual is a member of a social group), the *Need to belong* (i.e. the human driving force to form and maintain a minimum quantity of lasting, positive and significant interpersonal relationships), *Interpersonal trust* (i.e. the general trust that a social network user has in the other members of the social network) and *Social risk* (i.e. the probability that a product or service will negatively

affect the opinion and reaction other people hold of the individual) did not demonstrate sufficient discriminant and thus construct validity. As a result, these latent variables were deleted from the structural (or empirical model).

The finding that these related factors did not load as expected was interesting for a number of reasons. Firstly, these factors significantly influence general technology use as is evident from the extant literature, but this is not necessarily the case with the use of Facebook. Secondly, all these factors contain a social component: *Collective self-esteem* is related to a social group; the *Need to belong* drives relationships; *Interpersonal trust* is the general trust a technology user has in other technology users, and *Social risk* is the possibility of ridicule by others; above all, social network sites have socialising as a core assumption. Lastly, it could indicate that Facebook users are divided with regard to the value that they attach to the social motivators for continued Facebook usage.

The factors that did not illustrate sufficient discriminant and construct validity *(Collective self-esteem, Need to belong, Interpersonal trust* and *Social risk)* were excluded from the final analysis and are not further addressed in the following discussion of the findings. It is, therefore, important to consider possible reasons why these factors, that are all related to a dispositional social aspect of an individual, did not emerge as distinct factors. A possible reason for this varied value users of Facebook attaches to continued Facebook usage, is that Facebook is used individually and not in a social context. The users are, therefore, only indirectly in contact with other users by means of their comments and contributions, and the value attached to the reactions or feedback is varied. This varied value attached by users to ‘virtual social interaction‘ leads to the conclusion that no clear social dimension of continued Facebook usage serves as a motivator or barrier to continued Facebook usage.

Social capital is the goodwill that keeps communities ‘glued together’ and is sometimes referred to as the ‘currency’ of social networks, because it consists of mutually beneficial actions. Two levels of intensity with regard to the association of social capital have been identified in a social network context, namely bridging and bonding capital. Bridging capital implies weak ties and is analogous to the civil ties between acquaintances, whereas bonding capital refers to the strong ties that

develop between people who are referred to as friends, rather than acquaintances. The finding that the social dimensions *Collective self-esteem, Need to belong, Interpersonal trust* and *Social risk,* were excluded from the final model, may indicate that Facebook is mostly used to generate bridging social capital (connect with friends), rather than bonding capital (building long-term friendships). If not, it can be assumed that at least some of the social dimensions mentioned above, which are characteristic of bonding capital, would have been significant.

In addition, if the factors that did demonstrate sufficient discriminant validity (as presented below) are considered, it could suggest that Facebook users are motivated more by the gratifications derived from Facebook usage, rather than being motivated by the social dimension.

The factors that demonstrated sufficient discriminant validity for the Facebook users barriers model included: *Dispositional trust, Internet self-efficacy, Privacy risk* and *Psychological risk*, while the factors that loaded for the Facebook users motivators model included: *Need for cognition, Perceived ease of use, Perceived enjoyment, Perceived usefulness* and *Susceptibility to norm influence.*

8.3.1.2 Results of the exploratory factor analysis for non-users of Facebook

The exact same factors that did not demonstrate sufficient discriminant validity for the users of Facebook also did not demonstrate sufficient discriminant validity for the non-users of Facebook, namely *Collective self-esteem, Need to belong*, *Interpersonal trust* and *Social risk* and the same factors that loaded for the users of Facebook also loaded for the non-users of Facebook. The factors that demonstrated sufficient discriminant validity for the barriers model for non-users of Facebook thus also included: *Dispositional trust, Internet self-efficacy, Privacy risk* and *Psychological risk*, while the factors that loaded for the motivators model for non-users of Facebook also included: *Need for cognition, Perceived ease of use, Perceived enjoyment, Perceived usefulness* and *Susceptibility to norm influence.*

The similarity of the factors that did display sufficient discriminant validity and the factors that did not display sufficient discriminant validity for the users and non-users of Facebook, indicated that both users and non-users regard the same factors to be important in influencing their intentions to use Facebook.

Also, the factor loadings did not provide any indication as to why some people choose to use Facebook and others do not.

8.3.2 Tests for normality of data

It is important to test for the normality of the data analysed in the structural model, as the analysis is dependent on the normality distribution properties of the data. Using the Shapiro-Wilk normality technique, it was established that the data for both users and non-users of Facebook all had significant p-values of < 0.01 and, therefore, did not demonstrate univariate normality.

The skewness and kurtosis values for both users and non-users of Facebook, with a Chi-square p-value of < 0.01, indicated that the data for both groups did not demonstrate multivariate normality. This finding was confirmed by the normality estimation output of Lisrel 8.80 as part of the confirmatory factor analysis of the measurement model. Seeing that the data for both users and non-users are not normally distributed, the Robust Maximum Likelihood (RML) was used to estimate the parameters in the structural model.

8.3.3 Structural validity of the structural equation models

Following the guidelines provided by *Hair et al.* (2006: 645), the goodness-of-fit indices for all four groups under investigation showed a close fit and are briefly discussed next.

The goodness-of-fit for the Facebook users barriers model indicated a close goodness-of-fit for all the indices used (RMSEA = 0.0220, CFI = 0.994, Satorra-Bentler/df (183.591/160) = 1.1.14).

The fit indices for the Facebook users motivators model showed a close goodness-of-fit with all indices used (RMSEA = 0.0481 (< 0.05), CFI = 0.979 (> 0.95) and Satorra-Bentler/df (527.355/309) of 1.707).

The barriers model for non-users of Facebook also indicated a close goodness-of-fit with all indices showing a close fit, with scores of: RMSEA = 0.0512 (< 0.08), CFI = 0.971 (> 0.95) and Satorra-Bentler/df (335.083/179) = 1.872).

The goodness-of-fit indices for the barriers model for non-users of Facebook satisfied all the decision rules that indicated a close fit with values: RMSEA = 0.0547 (< 0.08), CFI = 0.980 (> 0.95), Satorra-Bentler/df (1155.952/579) = 1.966).

8.4 FINDINGS AND CONCLUSIONS FOR BARRIERS OF CONTINUED FACEBOOK USAGE

The primary statistical procedure used to test the hypothesised relationships of the expanded decomposed Theory of Planned Behaviour was structural equation modelling. The findings of the structural equation model for barriers for both users and non-users of Facebook indicated the same results, namely a statistically significant relationship between: *Dispositional trust* and continued usage, *Internet Self-efficacy* and continued usage, and *Psychological risk* and continued usage. The relation between *Privacy risk* and continued Facebook usage was found not to be statistically significant for users of Facebook. In contrast, a statistically significant relationship was found to exist between *Privacy risk* and Facebook usage for non-users of Facebook. These findings were compared to the findings of the extant literature and because the users and non-users demonstrated the same relationships, it will only be discussed once. The managerial implications are discussed separately and are therefore not included in the conclusions.

8.4.1 Dispositional trust and continued Facebook usage

Dispositional trust refers to the general propensity of users of technology to make themselves vulnerable to others, who can cause them loss, by performing or not performing certain actions in a variety of situations.

8.4.1.1 Dispositional trust of users of Facebook

The results of the structural model showed a significant, positive relationship between *Dispositional trust* and the *Continued intention to use* Facebook for users of Facebook (**Hypothesis H_1 was, therefore, accepted)**. From the acceptance of **H_1,** it can be concluded that the more an individual demonstrates a consistent tendency

to believe that others are well-meaning and reliable, the more likely they are to use Facebook, which is consistent with findings of studies on user acceptance theory.

This significant positive relationship between *Dispositional trust* and the *Continued intention to use* social networks also concur with the findings of Lin (2006: 542), who regards dispositional trust as particularly important in a virtual community environment, because of the lack of formal rules in such a context. Harridge-March, Grabner-Kräuter and Faullant (2008: 489) believe that dispositional trust does not only affect trust towards others, but also towards technical systems and social network sites. The importance of dispositional trust is also evident from the conclusions of Dwyer *et al.* (2008: 292) and Muise, Christofides and Desmarais (2009: 443) that dispositional trust affects social network usage, because low levels of trust leads to less sharing of information on social network sites.

8.4.1.2 Dispositional trust of non-users of Facebook

The results for the non-users of Facebook also showed a significant, positive relationship between *Dispositional trust* and the *Intention to use* Facebook for non-users of Facebook **(Hypothesis H10 was, therefore, accepted).** The *Dispositional trust* that non-users had in Facebook was very similar to that of the users of Facebook, which indicated a similar *Intention to use* Facebook than users of Facebook. It can thus be deduced that Facebook non-users are not generally less trusting than Facebook users and *Dispositional trust* could, therefore, not be a reason for non-users choosing not to use Facebook. As mentioned above, even though *Dispositional trust* did not distinguish users from non-users of social network sites, it will negatively influence the future possibility of non-users becoming users, or even users to become non-users, if *Dispositional trust* is not earned by using social network sites over time.

8.4.2 Internet self-efficacy and continued Facebook usage

Internet self-efficacy is the confidence an individual has in their ability to understand, navigate, find, evaluate and contribute information on the Internet, including social network sites such as Facebook.

8.4.2.1 Internet self-efficacy of users of Facebook

A significant, positive relationship between *Internet self-efficacy* and the *Continued intention to use* Facebook for users of Facebook was found **(Hypothesis H2 was, therefore, accepted)**. It stands to reason then that the higher an individual's *Internet self-efficacy,* the more likely they will be to use the Internet and the more they use the Internet, the more likely they are to use Facebook.

This finding coincides with the findings regarding general internet usage, which suggests that an individual's belief regarding his or her ability and confidence in successfully understanding, evaluating and navigating online content is directly influencing the extent and frequency of Internet usage (Gangadharbatla, 2008: 7). Krämer and Winter (2008: 106) agree that Internet self-efficacy increases social network use and found specifically that Internet self-efficacy influences the level of personal detail provided by users, the number of friends they have and the style of the user's profile picture on social network sites. Liang, Lai and Ku (2006: 45) found a positive relationship between Internet self-efficacy and technology use among a student population, who were in the age group that used social networks the most.

8.4.2.2 Internet self-efficacy of non-users of Facebook

A significant, positive relationship between *Internet self-efficacy* and the *Intention to use Facebook* was also found for non-users **(Hypothesis H11 was, therefore, accepted)**. The acceptance of H11 provided evidence that non-users also would have a higher *Intention to use* Facebook if they had higher *Internet Self-efficacy*. The *Internet self-efficacy* relation to *Intention to use* Facebook was stronger for non-users, compared to users of Facebook. It could be interpreted that, if non-users of social network sites were more confident in their ability to navigate, find, evaluate and contribute information on social network sites, they would be more likely to use social network sites.

8.4.3 Privacy risk and continued Facebook usage

Privacy risk is the concern that users of technology have that their private information will be stolen or that they will lose control over their private information,

which could lead to a form of loss, including economic loss, emotional loss or simply a loss of anonymity.

8.4.3.1 Privacy risk of users of Facebook

In a social network context, privacy refers to an individual's concern with a loss of control over who has access to his or her personal information and whether the information could be used to his or her detriment. The structural model analysis showed a non-significant relationship between *Privacy risk* and the *Continued intention to use* Facebook for users of Facebook (**Hypothesis H3 was, therefore, rejected).** This finding indicates that Facebook users' concern with privacy does not affect their social network usage.

Privacy concern has been found to moderate the behaviour of Internet users in most Internet contexts (Ardichvili, 2008; Levin *et al.* 2008: 8; Krasnova, Spiekermann, Koroleva & Hildebrand, 2010: 109), however, social networking seems to be the exception. Acquisti and Gross (2006: 58) believe there is a disconnect between social networks users' perception of privacy risk and their propensity to make information available about themselves, which the authors refer to as the "privacy paradox". Social network users do perceive the privacy risk Ardichvili (2008: 550), but do not perceive the risk as either immediate enough or large enough to change their social network usage. Furthermore, the nature of social networks is to share information, ideas and "cultural artefacts" and therefore, social network users suspend their privacy concerns in a social network context (Boyd, 2007b: 134). The privacy concerns associated with social network usage are often voiced by other parties, including the popular press, parents and government institutions, rather than the social network users themselves (George, 2006).

8.4.3.2 Privacy risk of non-users of Facebook

Hypothesis H12 was accepted as a result of the significant relationship that was found between *Privacy risk* and the *Intention to use* Facebook for non-users of Facebook. *Privacy risk,* therefore, was the only factor of the barriers model of Facebook users where a systematic difference existed between users and non-users of Facebook. The higher the privacy concern of the non-user of Facebook, the less likely they were to use Facebook. It can be concluded, therefore, than non-users

perceive the cost of possible privacy loss associated with providing personal information when joining and using Facebook, to outweigh the benefits derived from the usage thereof.

The negative relationship found between privacy risk and Facebook usage among non-users of social networks concurs with the concern with privacy associated with general Internet usage. This finding was to be expected as non-users of social networks are also general Internet users. The nature of Facebook as a social network site consists of creating a profile in which personal information can be shared and, therefore, if an individual felt strongly enough about protecting his or her information, he or she would not join and use Facebook.

8.4.4 Psychological risk and continued Facebook usage

Psychological risk is an individual's feeling of disappointment, embarrassment or loss of self-esteem resulting from friends and family knowing that a product or service failed.

8.4.4.1 Psychological risk of users of Facebook

Psychological risk was found to be significantly negatively related to the *Continued intention to use* Facebook by users of Facebook (**Hypothesis H4 was, therefore, accepted**).

The negative effects of *Psychological risk* as a result of social network use were expressed as an erosion of the psychological well-being of a user, and were found to be negatively associated with the positive outcomes of social network use. It can thus be concluded that the more users perceive possible negative effects to arise from social network usage, the less they will tend to use social networks.

These negative effects include sleep deprivation (Fu, Chan, Wong & Yip, 2010: 486), Facebook depression (Davila, Stroud, Starr, Miller, Yoneda & Hershenberg, 2009: 909) social isolation, ostracism, social disconnection (Williams, 2007: 427) and so-called 'Cyberostracism' - the latter referring to the sense of exclusion that can sometimes occur in online social environments, (D'Amato, Cecchi, Liccardi, Pellegrino, D'Amato & Sofia, 2012: 402).

8.4.4.2 Psychological risk of non-users of Facebook

A significant, negative relationship between *Psychological risk* and Facebook usage for non-users of Facebook was found (**Hypothesis H13 was, therefore, accepted)**. Both users and non-users of Facebook had higher intentions to use Facebook if the Psychological risk was reduced, however, non-users had a stronger relationship with the *Intention to use* Facebook than users. This discrepancy could indicate that non-users perceive a higher level of *Psychological risk* than users of Facebook do, and could be the reason for non-users' lack of *Intention to use* Facebook.

8.5 FINDINGS AND CONCLUSIONS FOR MOTIVATORS OF FACEBOOK USAGE

The structural model for the motivators of Facebook usage returned the same results for both users and non-users of Facebook. A significant relationship was found between *Perceived enjoyment* and Facebook usage and between *Perceived usefulness* and Facebook usage. A non-significant relationship was found between *Perceived ease of use* and Facebook usage, between *Need for cognition* and Facebook usage and between *Susceptibility to norm influence* and Facebook usage.

Perceived enjoyment, in a social network context, is the intrinsic motivation and hedonistic pleasure, rather than utilitarian purposes, derived from using social networks.

8.5.1.1 Perceived enjoyment of users of Facebook

The structural equation modelling analysis of the data found a significant, positive relationship between *Perceived enjoyment* and *Continued intention to use* Facebook by users of Facebook (**Hypothesis H5 was, therefore, accepted)**. *Perceived enjoyment* refers to the feelings of joy, pleasure, depression, displeasure or hate associated with a particular act. The positive relationship, therefore, means that the more the use of Facebook is perceived as enjoyable, the more Facebook is used, which is consistent with what has been reported in the literature.

Van der Heijden (2004: 695) suggests that *Perceived enjoyment* is even more important than usefulness in hedonic systems, with Shin (2007: 472) building on this

finding with the assertionthat social network fits the definition of hedonic systems and therefore it is expected that *Perceived enjoyment* will positively affect the use of social networks. In a study by Sledgianowski and Kulviwat (2009: 74) it was concluded that playfulness, which is operationalised similarly to perceived enjoyment, was the strongest determinant of actual social network usage. The finding that enjoyment is a key determinant of social network usage, have also been confirmed by Lin and Lu (2011: 1152).

The literature indicates that *Perceived enjoyment* is a common motivator for continued social network site usage. Social network sites contain a myriad of games and applications for users to enjoy. The achievement of goals, no matter how small, leads to a sense of achievement, which leads to a feeling of enjoyment, whereas the inability to achieve goals leads to frustration and a feeling of internal dissonance and unhappiness. Marketers and social network site developers should ensure that their organisational social network sites continuously add elements for users to enjoy, and that their sites are aesthetically pleasing and easy to navigate. Enjoyable sites will attract new customers and retain existing ones. In other words useful and informative sites will attract customers, while enjoyable sites retain them.

8.5.1.2 Perceived enjoyment of non-users of Facebook

There also existed a significant, positive relationship between *Perceived enjoyment* and *Intention to use* Facebook by non-users of Facebook (**Hypothesis H14 is, therefore, accepted)**. The relationship between *Perceived enjoyment* and *Intention to use* Facebook was much stronger for non-users compared to users, which could be interpreted that non-users perceive Facebook as potentially very enjoyable, but still choose not to join Facebook.

8.5.2 Perceived ease of use and continued Facebook usage

The amount of mental and physical energy expended to learn a new task or technology is referred to as *Perceived ease of use* and includes the belief that using a technological system is free of mental or physical effort.

8.5.2.1 Perceived ease of use of users of Facebook

The results of the data analysis indicated that the relationship between *Perceived ease of use* and the *Continued intention to use* Facebook was not statistically significant (**Hypothesis H6 was, therefore, rejected)**. This rather surprising result indicated that there was no significant relationship between the ease of use and social network usage.

Ease of use is one of the two constructs of the Technology Acceptance Model and therefore it was found to affect the acceptance of new technology in many different contexts, including social network sites (Liang *et al.*, 2006:45; Lee & Suh, 2013:181)

The non-significant relationship between *Perceived ease of use* and Facebook could have a number of causes: firstly, it could indicate that users consider Facebook so easy to use that *Perceived ease of use* is no longer considered when using Facebook; secondly, users of Facebook use Facebook regardless of whether or not it would be difficult to use, as the benefits of using Facebook outweigh the cost involved in using Facebook. Lastly, the help available is sufficient for users to deem *Perceived ease of use* as so easy that *it* is not even considered when deciding whether or not to use Facebook.

8.5.2.2 Perceived ease of use of non-users of Facebook

The analyses also found a non-significant, positive relationship between *Perceived ease of use* and the *Intention to use* Facebook by non-users of Facebook (**Hypothesis H15 was, therefore, rejected)**. The finding that *Perceived ease of use* did not significantly influence non-users' *Intention to use* Facebook, could indicate that the ease or difficulty of use of Facebook is not an impediment to use for non-users of Facebook.

8.5.3 Need for cognition and continued Facebook usage

The *Need for cognition* is the motivation to engage in cognitive activities, because of the pleasurable feelings a person obtains from engaging in such activities.

8.5.3.1 Need for cognition of users of Facebook

A non-significant relationship was found between the *Need for cognition* and the *Continued intention to use* to use Facebook by users of Facebook (**Hypothesis H7 was, therefore, rejected)**. The *Need for cognition* refers to an individual's need for satisfaction derived from learning, exploring, creating or understanding new technologies, such as social networks.

The literature indicates that people's need for cognition is related to their willingness to use complex systems (Haugtvedt, Petty & Cacioppo, 1992: 239). All the studies that found a relationship between technology adoption and the need for cognition, however, were conducted in real world or general Internet context. A study by Gangadharbatla (2008: 7) in a social network site context, concurs with the findings of the current study that *Need for cognition* did not have any influence on the intention of Internet users to use social network sites.

The non-significant relationship indicated that users were not motivated to use Facebook because of the mental stimulation of using Facebook, but were rather motivated by *Perceived enjoyment* or *Perceived usefulness*, as the strong positive relationships confirmed.

8.5.3.2 Need for cognition of non-users of Facebook

It was found that non-users of Facebook, consistent with the findings of the users of Facebook, did not perceive a significant negative relationship between *Need for cognition* and the *Intention to use* Facebook. **Hypothesis H16 was, therefore, rejected)**. This finding showed that non-users would not be attracted to use Facebook in order to obtain some form of mental stimulation.

8.5.4 Susceptibility to norm influence and continued Facebook usage

The susceptibility of a decision-maker to the influence of reference groups when making decisions is referred to as Susceptibility to norm influence.

8.5.4.1 Susceptibility to norm influence of users of Facebook

The relationship between *Susceptibility to norm influence* and the *Continued intention to use* Facebook was found to be not significant and, therefore, **Hypothesis H8 was rejected**. *Susceptibility to norm influence* is operationalised as an individual's susceptibility to the influences of reference groups such as friends and family. The non-significant relationship between the *Susceptibility to norm influence* of users of Facebook and the *Continued intention to use* Facebook indicated that participants were not influenced by reference groups in deciding whether or not to use Facebook.

The finding that susceptibility to norm influence is not related to social network usage is consistent with those of Chow and Chan (2008: 458) as well as (Dickinger, Arami & Meyer, 2008: 4).

It appears as if, to a large extent, the decision to join and use Facebook is made in isolation without direct influence from reference groups and, therefore, users are not influenced by reference groups.

8.5.4.2 Susceptibility to norm influence of non-users of Facebook

The relationship between *Susceptibility to norm influence* and Facebook usage for non-users of Facebook also indicated a non-significant relationship (**Hypothesis H17 was, therefore, rejected).** This finding implies that non-users are not dissuaded to use Facebook because of the potentially negative reactions of family and friends, and the decision not to use Facebook is more dispositional in nature.

8.5.5 Perceived usefulness and continued Facebook usage

Perceived usefulness is the perception of how much a system, such as the social network site Facebook, is able to assist with attaining a goal.

8.5.5.1 Perceived usefulness of users of Facebook

Consistent with the literature, a significant, positive relationship was found to exist between *Perceived usefulness* and the *Continued intention to use* Facebook by users of Facebook (**Hypothesis H9 was, therefore, accepted)**. *Perceived*

usefulness, in a social network context, refers to the degree to which an individual believes that using Facebook would be to his or her benefit. The strong positive relationship between *Perceived usefulness* and the *Continued intention to use* Facebook indicates that the more useful Facebook is perceived to be, the higher the user's intentions will be to use Facebook.

The literature relating to perceived usefulness concurs with the conclusions of this study, showing a significant, positive relationship between the perceived usefulness of a social network site and its usage (Lee & Suh, 2013: 181; Sledgianowski & Kulviwat, 2009: 74; Pfeil *et al.*, 2009: 653).

8.5.6 Perceived usefulness of non-users of Facebook

A significant, positive relationship between *Perceived usefulness* and Facebook usage was also found to be present for non-users of Facebook (**Hypothesis H18 was, therefore, accepted)**. This finding suggests that non-users do perceive the usefulness of Facebook, but still choose not to use it, because other factors, such as perceived risk, mediate the usage decision.

8.6 PREDICTING FACEBOOK USAGE

An important objective of this study was to compare users of Facebook with the non-users, to establish whether specific dispositional, situational or outcome variables were significant in influencing group membership. A logistic regression analysis was used to assess which variables had the biggest influence on group membership.

The results showed that the variables: specific Age categories, specific ethnic categories, Perceived ease of use, Perceived usefulness, Psychological risk, Perceived enjoyment and Susceptibility to norm influence were all significant predictors of Facebook usage. However, the variables gender, the age categories 26-35 years and 36-45 years, Dispositional trust, Internet self-efficacy, Need for cognition and Privacy risk were not statistically significant predictors of group membership.

These results revealed both differences and similarities obtained from the structural equation modelling. Perceived usefulness, Psychological risk and Perceived enjoyment were found to influence Facebook usage and Need for cognition were found not to influence Facebook usage for both analyses. The analyses further showed contrasting results for Dispositional trust, Internet self-efficacy and Privacy risk (that all showed significance in the structural equation modelling, but not for the logistic regression) and Perceived ease of use and Susceptibility to norm influence (indicating significance for the logistic regression, but not for the structural equation modelling).

The logistic regression analysis estimated an odds ratio, which predicted the change in odds of possible membership for a one unit increase of the significant independent variables. The logistic regression analyses and the structural equation modelling utilise different statistical techniques and different data sets and therefore could yield different results, as was the case in this study.

8.6.1 Interpretation of the logistic regression analysis.

The odds ratios indicated that Internet users between the ages of 36-45 were 65.7% less likely to be a member of Facebook than Internet users between the ages of 15-25. Individual Internet users 46 years and older, were 59.8% less likely to be Facebook users than Internet users between the ages of 15-25. In addition white Internet users were 258.3% more likely to be Facebook users than black Internet users and a one unit increase in *Perceived ease of use* by Internet use increased the odds of being a Facebook user by 97%. An increase in *Perceived enjoyment* would increase the likelihood of being a Facebook user by 70.5%. An increase in perceived *Psychological risk* decreased the odds of Facebook use by 20.6%. It was also found that *Perceived usefulness* decreased the likelihood of Facebook use by 19.4% and that *Susceptibility to norm influence* decreased the odds of Facebook usage by 28.5%.

The odds ratios indicated the same results as the cross-tabulations and ANOVA performed for the different age groups, namely that Facebook membership was less probable as age increased. This finding is consistent with Facebook-user statistics, which indicate that, the highest percentage of users fall within the 18-25 year old age

category. White Internet users are more likely to be Facebook users than Black users. More Internet users will use Facebook if it is seen as enjoyable, which is line with the finding of the gratifications sought by users of Facebook. The possibility of embarrassment and loss of self-esteem (*Psychological risk*) will reduce social network site usage and marketers and social network site developers have to ensure that social network sites are usable and available without failing. The findings predict a slight decrease in social network site usage if these sites are perceived as useful - a finding that concurs with the neutral feelings expressed towards *Information-seeking* as one of the gratifications sought from social network site usage. The finding that social network site usage will decrease if these sites are perceived as useful, could indicate that should social network sites be perceived as a means to connect with friends, rather than as a vocational utility, that social network site usage would decrease with an increase in *Susceptibility to norm influence*. This finding is consistent with the structural equation modelling results for both users and non-users of social network sites, which found that social influences do not increase social network site usage.

8.7 GRATIFICATIONS DERIVED FROM USING FACEBOOK

The analysis discussed in Section 8.6.1 focussed on the dispositional characteristics and situational influences that may affect the *Intention to use* Facebook, as antecedents to behaviour. The antecedents of the *Intention to use* Facebook were based on a decomposed Theory of Planned Behaviour. The findings indicated that dispositional factors and situational influences have limited use to predict Facebook usage or non-usage. In addition to the dispositional characteristics and situational factors, the outcomes or gratifications sought were investigated to comprehensively explore all the components of social network usage. The specific gratifications included in this study were based on the gratifications that were found to be significant in a study by Hsu (2007: 598). The gratifications sought by users of Facebook were then again compared to the potential gratifications non-users would seek, if they were to use Facebook.

8.7.1 Mean scores for gratifications

The gratification or the needs satisfaction derived from the different uses or outcomes of social network sites, serves as specific motivation for social network use. Table 8.1 presents a summary of the means of the uses and gratifications investigated, for both users and non-users of Facebook.

TABLE 8.1

GROUP STATISTICS FOR GRATIFICATIONS SOUGHT BY USERS AND NON-USERS OF FACEBOOK

Gratification sought	Mean score: Users of Facebook	Mean score: Non-users of Facebook
Information-seeking	4.33	3.79
Media drenching	5.12	3.78
Diversion	5.21	3.94
Performance	4.19	3.58
Narcissism	4.85	3.89
Relationship maintenance	5.96	4.73
Aesthetic experience	3.87	3.55
Virtual community	3.25	3.22
Reference	2.90	3.56

The mean scores for the gratifications sought by users of Facebook were all higher than the mean scores of the gratifications sought by nonusers, except for Reference. The mean scores indicate that they had moderate intentions to use Facebook for *Media drenching* (adding photos), *Diversion* (entertainment) and *Narcissism* (status updates). Neutral feelings were expressed towards *Information-seeking* (finding useful information), *Performance* (show identity) and *Aesthetic experience*. Facebook users showed moderate disinterest in *Virtual community* (establishing a new social life online) and *Reference* (user-generated content such as reviews). The highest mean score for users of Facebook was for *Relationship maintenance* (maintaining relationships with friends), indicating that the most important reason for using Facebook was to maintain relationships (bridging capital) with existing

acquaintances. From these results, it can be concluded that the users of Facebook use the social network site primarily for maintaining relationships with friends and also to some extent: to add media (such as photos); for entertainment and for narcissistic status updates.

The findings that users displayed a moderate disinterest in *Virtual community* and that the highest mean score for users of Facebook was for *Relationship maintenance,* support the conclusions above, namely that Facebook is primarily used to maintain bridging social capital, rather than to develop bonding social capital.

For the non-users of Facebook, the means indicated a neutral intention towards most gratifications related to the use of Facebook, except for two uses. Firstly, non-users also expressed moderately negative feelings towards *Virtual community* (establishing a new social life online) and secondly, expressed a moderately positive intention towards using Facebook for *Relationship maintenance* (maintaining bonds with friends). The generally neutral and somewhat negative inclination towards the use of social network sites by non-users of social network sites, suggest a lack of motivation by non-users to use social network sites, as they do not perceive the use or outcome thereof as beneficial to them.

8.7.2 Comparison of gratifications

The results of the t-tests used to compare the gratification perceptions of the two groups revealed that significant differences existed between users and non-users of Facebook in terms of all gratifications sought, except for *Virtual community.* In this instance both users and non-users were moderately disinterested in establishing a new social life online. The mean scores indicated a higher propensity for users of Facebook to seek gratification by using Facebook than was the case for non-users. This finding suggests that the reason non-users of social network sites choose not to use social network sites is that they do not perceive specific gratifications, as outcomes of social network site use, to be sufficiently beneficial to them.

8.8 COMPARISON OF RESULTS FOR USERS AND NON-USERS

8.8.1 Conclusions for barriers to Facebook use

The results denoted that three of the potential barriers of Facebook usage namely *Dispositional trust*, *Internet self-efficacy* and *Psychological risk* had the same influence on the intention of individuals to use Facebook among both users and non-users of Facebook. These constructs are an intrinsic, dispositional part of the character and abilities of an individual and suggest that the reason for the lack of non-users of Facebook to use Facebook is not due to systematic differences, in the characteristics between the users and non-users of Facebook. The one exception is *Privacy risk*, which was found to be a statistically significant barrier to Facebook usage by Facebook non-users and represents an important finding for social media marketers, as it serves as evidence that privacy concerns do influence users, to such an extent that they will choose not to use technology as a result of these concerns.

8.8.2 Conclusions for motivators of Facebook use

In a similar manner to the barriers to Facebook use, the results indicated that the motivators of Facebook usage (*Perceived enjoyment*, *Perceived usefulness*, *Perceived ease of use*, *Need for cognition* and *Susceptibility to norm influence)*, had the exact same influence on the *Intention to use* Facebook for both users and non-users of Facebook The motivators of Facebook were all external influences, except for the *Need to belong* (intrinsic), which was found to be an insignificant predictor of Facebook usage. This finding implies that there is no difference in the external influences exerted on both users and non-users of social network sites and, therefore, external influences are not the cause of the lack of use of social network sites by non-users.

8.8.3 Conclusion for the gratifications sought by means of Internet usage

The results showed significant statistical differences between the gratifications sought by Facebook usage between the users and non-users of Facebook. The

results further indicated a greater *Continued intention to use* Facebook by the users of Facebook compared to non-users in terms of gratifications sought. Based on these findings and the results of the motivators and barriers of Facebook, it is concluded that non-users' lack of social network site usage is not as a result of systematic dispositional difference with users or because of differing external influences, but rather due to the fact that non-users of social network sites are not motivated sufficiently by specific gratifications created by social network site usage.

8.9 THEORETICAL IMPLICATIONS OF THE STUDY

The most important contribution of this study was to the body of knowledge relating to the *Intention to use* social network sites. The study also offered empirical evidence of the effect of motivators and barriers to the *Continued intention to use* or *Intention to use* social network sites. In addition to the antecedents that determine the use of social network sites, *Continued intention to use* or *Intention to use* social network sites was also investigated by considering the specific outcomes and gratifications sought by social network use. This unique combination of empirical findings makes a substantial contribution to the literature.

Previous studies have investigated specific sub-sets of the *Intention to use* social networks, but as far as could be ascertained, no model exists that incorporates motivators, barriers and gratifications into one comprehensive model. The present study further added to the user acceptance theory, by constructing a decomposed model to examine the *Intention to use* social network sites. This decomposed model is based on the Theory of Planned Behaviour, but is expanded into a comprehensive model, by adding the relevant constructs from the Theory of Reasoned Action, the Technology Acceptance Model, the Motivational Model, the Theory of Planned Behaviour, a model combining the Technology Acceptance Model and the Theory of Planned Behaviour, the Model of Personal Computer Utilisation, the innovation diffusion theory, as well as the Social Cognitive Theory. This expanded, decomposed model could be further refined and tested and could form the basis of future research; as it offers a substantial contribution to user acceptance theory.

This study also investigated the *Continued intention to use* or *Intention to use* Facebook among both users and non-users of Facebook and thereby included the non-user group that has been largely neglected in literature, yet can contribute to the overall understanding of the reasons for social network usage.

A logistic regression analysis was performed to predict the odds whether an increase in the dependent variables would have an influence on social network site membership. These variables were: Gender, *Age, Ethnical classification*, *Perceived ease of use, Perceived usefulness, Psychological risk, Perceived enjoyment, Susceptibility to norm influence Dispositional trust, Internet Self-efficacy, Need for cognition* and *Privacy.*

The findings of this study also explored demographical differences about certain aspects of social network site usage. The demographical criteria of gender and age were investigated in terms of gender and years of membership, hours spent on social network sites, number of visits and number of social network site friends, further contributing to the literature on social network site use.

8.10 MANAGERIAL IMPLICATIONS

The implications of the findings of the study are discussed in a managerial context to address potential management practices and serve as a guide to marketers and managers when designing their online offerings.

8.10.1 The impact of demographic variables: Gender

The results of this study indicated very similar social network site usage between males and females with regard to membership duration, number of Facebook visits and the number of Facebook friends. A significant difference was found to exist only between males and females and the number of hours spent on social networks. Female users spent a significantly longer time on social networks compared to male users. This difference is of particular interest to marketers as previous research found that females purchased less online compared to their male counterparts, because online shopping does not offer the emotional involvement and the social interaction that females prefer when shopping (Dittmar, Long & Meek, 2004: 423).

Social network sites can, therefore, provide an emotional and social environment that will facilitate more e-commerce among female social network users.

8.10.2 The impact of demographic variables: Age

A negative relationship emerged between the number of hours spent on Facebook per week; the number of Facebook visits per week; and the number of friends, and the age of Facebook users. It is important for marketers to note that older social network users use more basic communication tools (sending messages) compared to younger users (greater use of videos and music). Older social network users are also more risk averse than younger users and, therefore, marketers should provide older social network users with more information of profiles or products, in order to alleviate some of the risk perceived by using social networks (Pfeil *et al.*, 2009: 653).

8.10.3 Dispositional trust

Dispositional trust is intrinsic in nature and is, therefore, difficult for marketers to influence while it is also a construct that changes slowly over time. *Dispositional trust* forms the basis of building *Interpersonal trust*, which can be influenced by marketers by constant, transparent communication and the constant benevolent actions of a social network. Another important strategy to develop *Dispositional trust* over time is promise keeping without compromise. Branding that emphasises the integrity and reliability of social network sites over time, will add to the *Dispositional trust* users have in social network sites. Actions without the expressed consent of users (such as the Facebook Beacon programme, where details of user actions were placed on the wall of friends without the users' consent) will reduce *Dispositional trust* over time and social network site usage will decline.

8.10.4 Internet self-efficacy

Even though *Internet Self-efficacy* is also a dispositional construct, marketers and social network site developers can not directly change this construct. However, marketers and developers can increase the usability of social network sites by keeping the layout simple and adding several different types of online help facilities,

such as a searchable help tab, a frequently asked questions (FAQ) section, live assistance, tutorials and demonstration videos.

It is posited that non-users could be intimidated and, therefore, lack the confidence in the technical skills that are required to use social network sites. The difference in the strength of the relationship between *Internet self-efficacy* for non-users of social network sites compared to users of social network sites, is an indication to developers and marketers that simplified layout and navigation of social network sites could increase the intention of non-users to use social network site in the future.

8.10.5 Privacy risk

Privacy concerns did not have a statistically significant influence on continued social network usage for users of social networks. This finding concurs with social network theory, which suggests that users are prepared to provide their personal information on social network sites, because they perceive the benefits of social network usage to outweigh the privacy risk associated with it and, therefore, it will not prevent them from using Facebook. The results of this study also revealed that it is not that users do not foresee a privacy risk, they simply believe that the benefits derived from using social network sites outweigh possible negative costs associated with possible privacy loss. Thus, *Privacy risk* did not influence the *Continued intention to use* social network sites for users of social network sites.

Privacy risk is one of the most publicised risks in the popular media and as a result *Privacy risk* is perceived by all Internet users to some extent. The finding in this study that non-users of social media significantly perceive *Privacy risk*, provides evidence that when this perception is strong enough; it will serve as a barrier to social network site usage. In addition, the fact that *Privacy risk* was the only variable where the findings differed between user and non-users of social media indicated that *Privacy risk* is the only antecedent that distinguishes users from non-users. Therefore, it can be concluded that perceived *Privacy risk* prevent non-users of social networks to join.

Social network site developers and marketers, therefore, need to specifically plan for and design websites to address privacy concerns and thereby reduce privacy risk.

Social network site developers should design websites so that privacy policies are clearly visible and users' access to the information should be easily accessible. In addition, practical aspects such as providing information usage confirmation, promise keeping, efficient error correction, trusted word of mouth referrals from social network site friends, and sufficient online security to protect private information are critical when making provision for the concept of trust in a website (Meng, 2012: 95).

8.10.6 Psychological risk

In the context of a social network site like Facebook, where interaction or exposure of personal information is the nature of the medium, embarrassment is a potential consequence of use and, therefore, also a potential barrier to use social network sites. From a marketing perspective, ensuring that a social network site is always available online (never "under construction") and ensuring that the user (as is the case with *Internet self-efficacy*) has access to a range of help options, will, to some extent, address *Psychological risk*.

Psychological risk has, at its essence, the perception that significant others have of an individual and, therefore, does have a social aspect to it. Unfortunately the social factors of the expanded model were not statistically significant and were, therefore, excluded. Thus, there is no evidence to further evaluate *Psychological risk* within a social context to determine if the social aspects are a possible basis for distinguishing between social network site users and non-users.

8.10.7 Perceived enjoyment

The literature reveals that *Perceived enjoyment* is a common motivator for continued social network site usage. Social network sites contain a myriad of games and applications for users to enjoy. The achievement of goals, no matter how small, leads to a sense of achievement, which, in turn, leads to a feeling of enjoyment, whereas not being able to achieve goals leads to frustration and a feeling of internal dissonance and unhappiness. Marketers and social network site developers need to ensure that their organisational social network sites continuously add elements for users to enjoy and that their sites are aesthetically pleasing and easy to navigate.

Enjoyable sites will attract new customers and retain existing ones. It has been said that useful and informative sites attract consumers while enjoyable sites retain these consumers.

8.10.8 Perceived ease of use

The believe that using technology will be free from mental or physical effort or *Perceived ease of use* did not demonstrate a significant relationship with social network use, which could be deemed as surprising. It is suggested that this finding of no relationship between *Perceived ease of use* and social media usage could also be explained in terms of the so-called 'hygiene factor' i.e. a factor that does not in itself motivates, but leads to demotivation if it is absent.

Marketers should ensure that their social marketing offering is easy to understand and easy to use; contains sufficient perceived benefits for consumers to use the social marketing site and ensure sufficient help is available to customers. Complexity or difficulty to understand or to navigate a social network site could serve as a barrier to social network site usage.

8.10.9 Need for cognition

The lack of a relationship between the *Need for cognition* and social network usage indicates to marketers that they and social network site developers should concentrate on providing marketing offerings that are perceived to be enjoyable and useful by users, rather than designing social network sites that concentrate on mental stimulation. This does not mean mental stimulation should be neglected, but the focus should rather be on *Perceived enjoyment* and *Perceived usefulness*.

8.10.10 Susceptibility to norm influence

The results of the study indicated that susceptibility to norm influence did not significantly affect usage for both users and non-users of social networks, Therefore, it can be concluded that the influence of opinion leaders has less of an effect on decision-making in a social network site context, such as Facebook, compared to a physical retail environment. The implication for marketers is that they have to target

consumers directly when they design their marketing offerings, by using social network sites rather than marketing reference groups or opinion leaders.

8.10.11 Perceived usefulness

The strong relationship between *Perceived usefulness* and *Continued intention to use* social network sites support earlier studies that investigated the specific aspects of social network sites that users found valuable. The gratifications sought from social network site usage, discussed in the next section, and those aspects of social network sites that users find of particular value, are examined.

The fact that users are more likely to utilise social network sites if it is perceived as useful, should indicate to marketers that one of the most important aspects to consider when designing a social network site is to investigate which gratifications social network site users perceive as useful. The expanded list of gratifications used in this study included *Information seeking, Media drenching, Diversion, Performance, Narcissism, Relationship maintenance, Aesthetic experience, Virtual community* and *Reference*. Marketers should determine which of these gratifications is applicable to their situation and product, that users should find of value and then incorporate it into their social network site offerings.

8.10.12 Gratifications derived from social network usage

In this study *Relationship maintenance* (maintaining relationship with friends) was found to be the main reason for using Facebook. The current study also indicated that Facebook was used for *Media drenching* (adding photos), *Diversion* (entertainment) and *Narcissism* (status updates).

The generally neutral and somewhat negative inclination towards the use of social network sites by non-users of social network sites, points to a lack of motivation by non-users to use social network sites, as they do not see the uses or outcome as beneficial to them.

Gratifications sought was found to be situation-specific and was influenced by factors such as the social network user's social and psychological needs, purchase occasion and expectations (Katz, Blumler & Gurevitch, 1973: 509). Therefore, it is r

recommended that marketers and social network site developers facilitate the personalisation of their social network gratifications to suit the unique combination of the needs of different social network users.

8.11 LIMITATIONS OF THE STUDY

Even though the current study made use of quota sampling in order to make the sample more representative of the greater population of Facebook users, the sample was still a convenience sample and the data collected were, therefore, non-probability data and limited the generalisation of the results for all Facebook users.

The gratifications sought have been measured using a single item to represent each use of Facebook, as has been done in other studies. This could also limit the generalisation of gratifications and results could be limited to a specific action, rather than representing all dimensions of the gratification constructs.

A number of latent variables did not demonstrate enough discriminant validity and were, therefore, excluded from the final empirical model. A replication study should be conducted, with alternative items for these latent variables, to verify whether excluding these variables were justified.

The respondents used in the present study were mostly from South Africa and, therefore, there could be cultural differences between South African respondents and other respondents worldwide. It is suggested, therefore, that a cross-cultural study would yield more representative results.

Even though this study attempted to construct a comprehensive model of social network usage employing user acceptance theory as basis, important aspects from other psychological discourses could assist in developing an even more comprehensive model with additional constructs.

8.12 SUMMARY

In conclusion, the purpose of this study was to investigate the antecedents of the *Intention to use* social network sites, by investigating the motivators and barriers of

social network site usage. In addition, specific gratifications as outcomes and motivations for use, were investigated. These aspects were examined in terms of both users and non-users of Facebook to determine if there were systematic differences among the two groups and, in that way, to gain a better understanding of the reasons for social network site usage.

The results indicated that specific gratifications, rather than dispositional characteristics or external influences, have a greater influence on non-users' lack of participation in social network sites. This could suggest that specific gratifications are the reason for the usage of social network site by users of these sites. Marketers, therefore, need to ensure that any marketing offerings should address the specific gratifications needs of their target market in order to attract more traffic to their social network sites.

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ANNEXURE A – CONSTRUCT ITEMS IN QUESTIONNAIRE

Collective self-esteem

I feel I have much to offer other members of Facebook	CSES1
I feel I am a useful member of Facebook	CSES2
Overall, I feel that belonging to Facebook is worth my while	CSES3
In general, Facebook is respected by my friends	CSES4
In general, belonging to Facebook is important to my self-image	CSES6

Ease of use

Interaction with Facebook is simple	EOU1
It took little effort for me to become skilful at using Facebook	EOU2
I find Facebook easy to use	EOU3
Learning to navigate Facebook was easy for me	EOU4
Using Facebook do not require a great deal of mental effort	EOU5
It is easy to understand how to use Facebook	EOU6

Interpersonal trust

I think that the information exchanged on Facebook is reliable enough to help me make a decision	IPT2
I think that most Facebook users do take into account the repercussions of their actions	IPT3
I think that the information offered by Facebook users is sincere and honest	IPT4
I think that Facebook users do not intentionally carry out actions that could harm other users	IPT5
I think that most Facebook user profiles are a truthful reflection of who the users really are	IPT6

Internet self-efficacy

I feel confident understanding terms/words relating to Internet hardware	ISE1
I feel confident understanding terms/words relating to Internet software	ISE2
I feel confident troubleshooting Internet problems	ISE3
I feel confident explaining why a programme will not run on the Internet	ISE4
I feel confident learning advanced skills within a specific Internet programme	ISE5
I am comfortable using the Internet and feel no anxiety while using it	ISE6

Need for cognition

I like to have the responsibility of handling a situation that requires a lot of thinking	NFC2
I enjoy thinking hard and for long hours	NFC3
The idea of relying on thought to progress in life appeals to me	NFC4
I really enjoy a task that involves finding new solutions to problems	NFC5
The notion of thinking “out of the box” is appealing to me	NFC6
I feel satisfaction after completing a task that required a lot of mental effort	NFC7

Need to belong

I try not to do things that will make other people avoid or reject me	NTB2
I need to feel that there are people I can turn to in times of need in my life	NTB3
I do not like being alone	NTB4
It bothers me a great deal when I am not included in other people's plans	NTB5
My feelings are easily hurt when I feel that others do not accept me	NTB6

Perceived enjoyment

Using Facebook is entertaining	PE1
I find Facebook pleasant to use	PE2
Participating in Facebook is exiting	PE3
Facebook is fun to use	PE4
Participating in Facebook is enjoyable	PE5
I believe that participating in Facebook would be pleasurable	PE6

Privacy risk

I am concerned that people could access my personal information on Facebook	PRIV1
Facebook do not respect their users' personal information	PRIV2
I am concerned with some of the aspects I read in the privacy statement of Facebook	PRIV3
I am concerned that Facebook could share my information with others outside of Facebook	PRIV4
I am concerned that hackers might get to my personal information on Facebook	PRIV5
I am concerned with the fact that my Facebook activity will be monitored by others	PRIV6

Psychological risk

I am concerned I could be "rated" based on my looks on Facebook	PSYC1
I am concerned that Facebook could cause cliques within my circle of friends, which may harm my friendships	PSYC2
I am concerned with obscene pictures on Facebook	PSYC3
I believe that using Facebook may leave little time for real-world interaction, which could make me feel lonely	PSYC5
I am concerned that I could be discriminated against based on ethnic origin on Facebook	PSYC6
I am concerned that I will be exposed to one or more of the following on Facebook: cursing, swearing, expletives, bad words, dirty words, nasty words, cussing, blasphemy, obscene material, or indecent material	PSYC7

Perceived usefulness

I believe Facebook is useful to me in my job/academic work	PU1
Using Facebook have a significant effect on the speed with which I am able to accomplish job/academic tasks online	PU2
Using Facebook significantly increases my ability to communicate online	PU4
Using Facebook gives me greater control over my job/academic work	PU5
Using Facebook makes it easier to accomplish certain jobs or academic-related tasks	PU6

Self-esteem

On the whole, I am satisfied with myself	SES1
I feel that I have a number of good qualities	SES2
I am able to do things as well as most other people	SES3
I feel I have much to be proud of in my life	SES4
I feel that I'm a person of worth	SES5
All in all, I am inclined to think that I am a success	SES6

Susceptibility to norm influence

People who are important to me think I should use Facebook	SNI2
If other people can see me using a product, I often purchase the brand they expect me to buy	SNI3
It is important that others like the products and brands I buy	SNI4
I often identify with other people by purchasing the same products and brands they purchase	SNI5
I like to know what brands and products make good impressions on others	SNI6

Social risk

I am concerned that the time I spend on Facebook could reduce my real-world activities	SOC1
I am concerned with what others might think of me because of obscene photos that other people could send to me on Facebook	SOC2
I am concerned that other people's discussion of illegal drug usage on Facebook could reflect poorly on me	SOC3
I am concerned with what others think of me because of gangster involvement that people send to me on Facebook	SOC4
I am concerned I could be humiliated by someone on Facebook as part of an initiation	SOC5

Dispositional trust

Most people can be trusted	DT1
Most people try to be fair	DT2
Most of the time people try to be helpful	DT3
People mostly tell the truth	DT4
People usually try to cooperate with others	DT5

ANNEXURE B

QUESTIONNAIRE FOR USERS OF FACEBOOK

Facebook users

Section A: Demographic information

Gender		
Age		
Race		
For how long have you been a member of Facebook?	Years	Months
How much time do you spend on Facebook per week?	Hrs	
How many times do you visit Facebook per week?		
Approximately how many Facebook friends do you have?		

Section B: Statements:

Instructions: For each of the statements below, please indicate to what extent you agree with the statement.

		1. Strongly disagree	2. Disagree	3. Disagree somewhat	4. Neither agree nor disagree	5. Agree somewhat	6. Agree	7. Strongly agree
1	I believe Facebook is useful to me in my job/academic work	1	2	3	4	5	6	7
2	Using Facebook is entertaining	1	2	3	4	5	6	7
3	Interaction with Facebook is simple	1	2	3	4	5	6	7
4	My feelings are easily hurt when I feel that others do not accept me	1	2	3	4	5	6	7
5	On the whole, I am satisfied with myself	1	2	3	4	5	6	7
6	I feel I have much to offer other members of Facebook	1	2	3	4	5	6	7

7	I am concerned that people could access my personal information on Facebook	1	2	3	4	5	6	7
8	I am concerned I could be "rated" based on my looks on Facebook	1	2	3	4	5	6	7
9	I am concerned that the time I spend on Facebook could reduce my real-world activities	1	2	3	4	5	6	7
10	I feel confident understanding terms/words relating to Internet hardware	1	2	3	4	5	6	7
11	Using Facebook have a significant effect on the speed with which I am able to accomplish job/academic tasks online	1	2	3	4	5	6	7
12	It took little effort for me to become skilful at using Facebook	1	2	3	4	5	6	7
13	I find Facebook pleasant to use	1	2	3	4	5	6	7
14	I try not to do things that will make other people avoid or reject me	1	2	3	4	5	6	7
15	I feel that I have a number of good qualities	1	2	3	4	5	6	7
16	I feel I am a useful member of Facebook	1	2	3	4	5	6	7
17	I like to have the responsibility of handling a situation that requires a lot of thinking	1	2	3	4	5	6	7
18	I think that the information exchanged on Facebook is reliable enough to help me make a decision	1	2	3	4	5	6	7
19	Facebook do not respect their users' personal information	1	2	3	4	5	6	7
20	I am concerned that Facebook could cause cliques within my circle of friends, which may harm my friendships	1	2	3	4	5	6	7
21	I am concerned with what others might think of me because of obscene photos that other people could send to me on Facebook	1	2	3	4	5	6	7
22	People who are important to me think I should use Facebook	1	2	3	4	5	6	7
23	I feel confident understanding terms/words relating to Internet software	1	2	3	4	5	6	7
24	I find Facebook easy to use	1	2	3	4	5	6	7
25	Participating in Facebook is exiting	1	2	3	4	5	6	7
26	I need to feel that there are people I can turn to in times of need in my life	1	2	3	4	5	6	7

27	I am able to do things as well as most other people	1	2	3	4	5	6	7
28	Overall, I feel that belonging to Facebook is worth my while	1	2	3	4	5	6	7
29	I enjoy thinking hard and for long hours	1	2	3	4	5	6	7
30	I think that most Facebook users do take into account the repercussions of their actions	1	2	3	4	5	6	7
31	I am concerned with some of the aspects I read in the privacy statement of Facebook	1	2	3	4	5	6	7
32	I am concerned with obscene pictures on Facebook	1	2	3	4	5	6	7
33	I am concerned that other people's discussion of illegal drug usage on Facebook could reflect poorly on me	1	2	3	4	5	6	7
34	If other people can see me using a product, I often purchase the brand they expect me to buy	1	2	3	4	5	6	7
35	I feel confident troubleshooting Internet problems	1	2	3	4	5	6	7
36	Using Facebook significantly increases my ability to communicate online	1	2	3	4	5	6	7
37	Learning to navigate Facebook was easy for me	1	2	3	4	5	6	7
38	Facebook is fun to use	1	2	3	4	5	6	7
39	I do not like being alone	1	2	3	4	5	6	7
40	I feel I have much to be proud of in my life	1	2	3	4	5	6	7
41	In general, Facebook is respected by my friends	1	2	3	4	5	6	7
42	The idea of relying on thought to progress in life appeals to me	1	2	3	4	5	6	7
43	I think that the information offered by Facebook users is sincere and honest	1	2	3	4	5	6	7
44	I am concerned that Facebook could share my information with others outside of Facebook	1	2	3	4	5	6	7
45	I am concerned with what others think of me because of gangster involvement that people send to me on Facebook	1	2	3	4	5	6	7
46	It is important that others like the products and brands I buy	1	2	3	4	5	6	7

47	I feel confident explaining why a programme will not run on the Internet	1	2	3	4	5	6	7
48	Using Facebook gives me greater control over my job/academic work	1	2	3	4	5	6	7
49	Using Facebook do not require a great deal of mental effort	1	2	3	4	5	6	7
50	Participating in Facebook is enjoyable	1	2	3	4	5	6	7
51	It bothers me a great deal when I am not included in other people's plans	1	2	3	4	5	6	7
52	I feel that I'm a person of worth	1	2	3	4	5	6	7
53	I really enjoy a task that involves finding new solutions to problems	1	2	3	4	5	6	7
54	I think that Facebook users do not intentionally carry out actions that could harm other users	1	2	3	4	5	6	7
55	I am concerned that hackers might get to my personal information on Facebook	1	2	3	4	5	6	7
56	I believe that using Facebook may leave little time for real-world interaction, which could make me feel lonely	1	2	3	4	5	6	7
57	I am concerned I could be humiliated by someone on Facebook as part of an initiation	1	2	3	4	5	6	7
58	I often identify with other people by purchasing the same products and brands they purchase	1	2	3	4	5	6	7
59	I feel confident learning advanced skills within a specific Internet programme	1	2	3	4	5	6	7
60	Using Facebook makes it easier to accomplish certain jobs or academic-related tasks	1	2	3	4	5	6	7
61	It is easy to understand how to use Facebook	1	2	3	4	5	6	7
62	I believe that participating in Facebook would be pleasurable	1	2	3	4	5	6	7
63	All in all, I am inclined to think that I am a success	1	2	3	4	5	6	7
64	In general, belonging to Facebook is important to my self-image	1	2	3	4	5	6	7
65	The notion of thinking “out of the box” is appealing to me	1	2	3	4	5	6	7
66	I think that most Facebook user profiles are a truthful reflection of who the users really are	1	2	3	4	5	6	7

67	I am concerned with the fact that my Facebook activity will be monitored by others	1	2	3	4	5	6	7
68	I am concerned that I could be discriminated against based on ethnic origin on Facebook	1	2	3	4	5	6	7
69	I like to know what brands and products make good impressions on others	1	2	3	4	5	6	7
70	I am comfortable using the Internet and feel no anxiety while using it	1	2	3	4	5	6	7
71	I feel satisfaction after completing a task that required a lot of mental effort	1	2	3	4	5	6	7
72	I am concerned that I will be exposed to one or more of the following on Facebook: cursing, swearing, expletives, bad words, dirty words, nasty words, cussing, blasphemy, obscene material, or indecent material	1	2	3	4	5	6	7

Section C: Usage statements

73	In the future I intend to continue to use social networking sites	1	2	3	4	5	6	7
74	I use Facebook to find information	1	2	3	4	5	6	7
75	I use Facebook to post photos or other media	1	2	3	4	5	6	7
76	I use Facebook for entertainment	1	2	3	4	5	6	7
77	I use Facebook in order to share my expertise with the members of Facebook	1	2	3	4	5	6	7
78	I use Facebook to share my interests with more people	1	2	3	4	5	6	7
79	I use Facebook to stay in touch with my friends	1	2	3	4	5	6	7
80	I use Facebook to look at attractive graphics	1	2	3	4	5	6	7
81	I use Facebook so I can be part of a group	1	2	3	4	5	6	7
82	I use Facebook to find profitable financial information, such as bargains	1	2	3	4	5	6	7

Section D: Trust

Please tell me on a score between 1 and 7, where 1 means you cannot be too careful and 7 means that most people can be trusted.

83	Most people can be trusted	1	2	3	4	5	6	7
84	Most people try to be fair	1	2	3	4	5	6	7
85	Most of the time people try to be helpful	1	2	3	4	5	6	7
86	People mostly tell the truth	1	2	3	4	5	6	7
87	People usually try to cooperate with others	1	2	3	4	5	6	7

ANNEXURE C

QUESTIONNAIRE FOR NON-USERS OF FACEBOOK

Facebook Non-Users

Section A: General information

Gender	
Age	
Race	

Section B: Statements:

Instructions: For each of the statements below, please indicate to what extent you agree with the statement.

		1. Strongly disagree	2. Disagree	3. Disagree somewhat	4. Neither agree nor disagree	5. Agree somewhat	6. Agree	7. Strongly agree
1	I believe Facebook could be useful to me in my job/academic work	1	2	3	4	5	6	7
2	I believe participating in Facebook would be entertaining	1	2	3	4	5	6	7
3	Interacting with others using Facebook would be simple	1	2	3	4	5	6	7
4	My feelings are easily hurt when I feel that others do not accept me	1	2	3	4	5	6	7
5	On the whole, I am satisfied with myself	1	2	3	4	5	6	7
6	I feel I would have much to offer other members of Facebook	1	2	3	4	5	6	7
7	I am concerned that people could access my personal information on Facebook	1	2	3	4	5	6	7
8	I am concerned I could be "rated" based on my looks on Facebook	1	2	3	4	5	6	7

9	I am concerned that the time I spend on Facebook could reduce my real-world activities	1	2	3	4	5	6	7
10	I feel confident understanding terms/words relating to Internet hardware	1	2	3	4	5	6	7
11	Using Facebook could have a significant effect on the speed with which I am able to accomplish job/academic tasks online	1	2	3	4	5	6	7
12	It would take little effort for me to become skilful at using Facebook	1	2	3	4	5	6	7
13	I would find Facebook pleasant to use	1	2	3	4	5	6	7
14	I try not to do things that will make other people avoid or reject me	1	2	3	4	5	6	7
15	I feel that I have a number of good qualities	1	2	3	4	5	6	7
16	I feel I would be a useful member of Facebook	1	2	3	4	5	6	7
17	I like to have the responsibility of handling a situation that requires a lot of thinking	1	2	3	4	5	6	7
18	I think that the information exchanged on Facebook is reliable enough to help me make a decision	1	2	3	4	5	6	7
19	Facebook do not respect their users' personal information	1	2	3	4	5	6	7
20	I am concerned that Facebook could cause cliques within my circle of friends, which may harm my friendships	1	2	3	4	5	6	7
21	I am concerned with what others might think of me because of obscene photos that other people could send to me on Facebook	1	2	3	4	5	6	7
22	People who are important to me think I should use Facebook	1	2	3	4	5	6	7
23	I feel confident understanding terms/words relating to Internet software	1	2	3	4	5	6	7
24	I would find Facebook easy to use	1	2	3	4	5	6	7
25	I believe participating in Facebook would be exiting	1	2	3	4	5	6	7
26	I need to feel that there are people I can turn to in times of need in my life	1	2	3	4	5	6	7
27	I am able to do things as well as most other people	1	2	3	4	5	6	7
28	Overall, I feel that belonging to Facebook would be worth my while	1	2	3	4	5	6	7
29	I enjoy thinking hard and for long hours	1	2	3	4	5	6	7

30	I think that most Facebook users do take into account the repercussions of their actions	1	2	3	4	5	6	7
31	I am concerned with some of the aspects I read in the privacy statement of Facebook	1	2	3	4	5	6	7
32	I am concerned with obscene pictures on Facebook	1	2	3	4	5	6	7
33	I am concerned that other people's discussion of illegal drug usage on Facebook could reflect poorly on me	1	2	3	4	5	6	7
34	If other people can see me using a product, I often purchase the brand they expect me to buy	1	2	3	4	5	6	7
35	I feel confident troubleshooting Internet problems	1	2	3	4	5	6	7
36	Using Facebook could significantly increase my ability to communicate online	1	2	3	4	5	6	7
37	Learning to navigate Facebook would be easy for me	1	2	3	4	5	6	7
38	I would find Facebook fun to use	1	2	3	4	5	6	7
39	I do not like being alone	1	2	3	4	5	6	7
40	I feel I have much to be proud of in my life	1	2	3	4	5	6	7
41	In general, Facebook is respected by my friends	1	2	3	4	5	6	7
42	The idea of relying on thought to progress in life appeals to me	1	2	3	4	5	6	7
43	I think that the information offered by Facebook users is sincere and honest	1	2	3	4	5	6	7
44	I am concerned that Facebook could share my information with others outside of Facebook	1	2	3	4	5	6	7
45	I am concerned with what others think of me because of gangster involvement that people send to me on Facebook	1	2	3	4	5	6	7
46	It is important that others like the products and brands I buy	1	2	3	4	5	6	7
47	I feel confident explaining why a programme will not run on the Internet	1	2	3	4	5	6	7
48	Using Facebook could give me greater control over my job/academic work	1	2	3	4	5	6	7
49	Using Facebook would not require a great deal of mental effort	1	2	3	4	5	6	7

50	I believe that participating in Facebook would be enjoyable	1	2	3	4	5	6	7
51	It bothers me a great deal when I am not included in other people's plans	1	2	3	4	5	6	7
52	I feel that I'm a person of worth	1	2	3	4	5	6	7
53	I really enjoy a task that involves finding new solutions to problems	1	2	3	4	5	6	7
54	I think that Facebook users do not intentionally carry out actions that could harm other users	1	2	3	4	5	6	7
55	I am concerned that hackers might get to my personal information on Facebook	1	2	3	4	5	6	7
56	I believe that using Facebook may leave little time for real-world interaction, which could make me feel lonely	1	2	3	4	5	6	7
57	I am concerned I could be humiliated by someone on Facebook as part of an initiation	1	2	3	4	5	6	7
58	I often identify with other people by purchasing the same products and brands they purchase	1	2	3	4	5	6	7
59	I feel confident learning advanced skills within a specific Internet programme	1	2	3	4	5	6	7
60	Using Facebook would make it easier to accomplish certain jobs or academic-related tasks	1	2	3	4	5	6	7
61	Using Facebook would be easy to understand	1	2	3	4	5	6	7
62	Participating in Facebook is pleasurable	1	2	3	4	5	6	7
63	All in all, I am inclined to think that I am a success	1	2	3	4	5	6	7
64	In general, belonging to Facebook is important to my self-image	1	2	3	4	5	6	7
65	The notion of thinking “out of the box” is appealing to me	1	2	3	4	5	6	7
66	I think that most Facebook user profiles are a truthful reflection of who the users really are	1	2	3	4	5	6	7
67	I am concerned with the fact that my Facebook activity will be monitored by others	1	2	3	4	5	6	7
68	I am concerned that I could be discriminated against based on ethnic origin on Facebook	1	2	3	4	5	6	7

69	I like to know what brands and products make good impressions on others	1	2	3	4	5	6	7
70	I am comfortable using the Internet and feel no anxiety while using it	1	2	3	4	5	6	7
71	I feel satisfaction after completing a task that required a lot of mental effort	1	2	3	4	5	6	7
72	I am concerned that I will be exposed to one or more of the following on Facebook: cursing, swearing, expletives, bad words, dirty words, nasty words, cussing, blasphemy, obscene material, or indecent material	1	2	3	4	5	6	7
	Section C: Usage statements							
73	I intend to start using Facebook in the future	1	2	3	4	5	6	7
74	I would use Facebook to find information	1	2	3	4	5	6	7
75	I would use Facebook to post photos or other media	1	2	3	4	5	6	7
76	I would use Facebook for entertainment	1	2	3	4	5	6	7
77	I would use Facebook in order to share my expertise with the members of Facebook	1	2	3	4	5	6	7
78	I would use Facebook to share my interests with more people	1	2	3	4	5	6	7
79	I would use Facebook to stay in touch with my friends	1	2	3	4	5	6	7
80	I would use Facebook to look at attractive graphics	1	2	3	4	5	6	7
81	I would use Facebook so I can be part of a group	1	2	3	4	5	6	7
82	I would use Facebook to find profitable financial information, such as bargains	1	2	3	4	5	6	7

Section D: Trust

Please tell me on a score between 1 and 7, where 1 means you cannot be too careful and 7 means that most people can be trusted.

83	Most people can be trusted	1	2	3	4	5	6	7
84	Most people try to be fair	1	2	3	4	5	6	7
85	Most of the time people try to be helpful	1	2	3	4	5	6	7
86	People mostly tell the truth	1	2	3	4	5	6	7
87	People usually try to cooperate with others	1	2	3	4	5	6	7